Colorado Department of Public Health and Environment

OPERATING PERMIT

DCP Midstream, LP
Spindle Gas Processing Plant

First Issued: May 1, 1999
Renewed: July 1, 2012

AIR POLLUTION CONTROL DIVISION
COLORADO OPERATING PERMIT

FACILITY NAME:	Spindle Gas Processing Plant	OPERATING PERMIT NUMBER
FACILITY ID:	1230015	**95OPWE039**
RENEWED:	July 1, 2012	
EXPIRATION DATE:	July 1, 2017	
MODIFICATIONS:	See Appendix F of Permit	

Issued in accordance with the provisions of Colorado Air Pollution Prevention and Control Act, 25-7-101 et seq and applicable rules and regulations.

ISSUED TO:

DCP Midstream, LP
370 17th Street, Suite 2500
Denver, CO 80202

PLANT SITE LOCATION:

Sec 34, T2N, R67W
¼ mile north of Highway 52,
3½ miles west of Ft Lupton, CO
Weld County

INFORMATION RELIED UPON

Operating Permit Renewal Application Received: May 1, 2003

And Additional Information Received: April 4, 2003, June 23, 2003, October 20, 2004, November 22, 2004, March 25, 2005, April 28, 2005, August 24, 2005, July 10, 2006, March 27, 2007, April 2, 2008, April 30, 2008, April 21, 2009, April 24, 2009, July 31, 2009, June 21, 2010, July 19, 2010, August 19, 2010 and March 17, 2011

Nature of Business: Natural Gas Liquids Processing and Gathering

Primary SIC: 1321

RESPONSIBLE OFFICIAL

Name: Joseph Kuchinski
Title: VP Area Operations
Phone: (970) 378-6345

FACILITY CONTACT PERSON

Name: Wesley Hill
Title: Senior Environmental Specialist
Phone: (303) 595-3331

SUBMITTAL DEADLINES

Semi-Annual Monitoring Period: July 1 – December 31, January 1 – June 30

Semi-Annual Monitoring Report: February 1 & August 1, 2013 and subsequent years

Annual Compliance Period: July 1 – June 30

Annual Compliance Certification: August 1, 2013 and subsequent years

Note that the Semi-Annual Monitoring Reports and Annual Compliance report must be received at the Division office by 5:00 p.m. on the due date. Postmarked dates will not be accepted for the purposes of determining the timely receipt of those reports.

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SECTION I - General Activities and Summary

1. Permitted Activities

1.1 This plant is classified as a natural gas processing plant as set forth under Standard Industrial Classification 1321. The Spindle Gas Processing Plant consists of a gas processing skid and a fractionation assembly. The gas processing skid utilizes straight refrigeration coupled with a cryogenic expander process to recover natural gas liquid (NGL) mixtures from the inlet gas stream. The NGL stream is sent to the fractionation assembly to make various fuel products. A high Btu content methane/ethane residue gas stream is created by the removal of the NGL. The residue gas stream is recompressed and routed to the sales pipeline. A triethylene glycol (TEG) dehydration system operates to dehydrate a slip stream of the residue gas used to regenerate the mole sieves. The mole sieves function to dehydrate the inlet gas.

The fractionation assembly separates the NGL product from the gas plant into pure streams consisting of ethane, propane, and butane/gasoline mix (BG Mix). The ethane is recompressed and routed to the pipeline. The propane and BG mix are each stored in pressurized bullet tanks for transport off-site by truck.

This Title V Operating Permit for the Spindle Plant also addresses the adjacent Spindle-CIG Booster Station previously owned by Colorado Interstate Gas, Inc..

There are twelve (12) engines powering natural gas compressors operating in inlet, residue, refrigeration or air compressor service. As noted previously, one TEG dehydration unit operates to remove the water from the residue gas used to regenerate the mole sieves. The site also operates with a 15 million Btu per hour hot oil heater, one condensate loadout rack, and four (4) 300 barrel condensate storage tanks. Fugitive VOC emissions from the entire facility are subject to the leak control provisions of NSPS Subpart KKK.

The plant is located west of Fort Lupton in Weld County, Colorado. This facility is located in an Area classified as attainment for all pollutants except ozone. It is classified as non-attainment for ozone and is part of the 8-hr Ozone Control Area as defined in Regulation No. 7, Section II.A.1. There are no affected states within 50 miles of the plant. Rocky Mountain National Park is a Federal Class I designated area within 100 kilometers of the plant.

1.2 Until such time as this permit expires or is modified or revoked, the permittee is allowed to discharge air pollutants from this plant in accordance with the requirements, limitations, and conditions of this permit.

1.3 This Operating Permit incorporates the applicable requirements contained in the underlying construction permits, and does not affect those applicable requirements, except as modified during review of the application or as modified subsequent to permit issuance using the modification procedures found in Regulation No. 3, Part C. These Part C procedures meet all applicable substantive New Source Review requirements for purposes of this Operating Permit and shall survive reissuance. This Operating Permit incorporates the applicable requirements (except as noted in Section II) from the following Colorado Construction Permit(s): 09WE0195.

1.4 All conditions in this permit are enforceable by the US Environmental Protection Agency (EPA), Colorado Air Pollution Control Division (hereinafter Division) and its agents, and citizens unless otherwise specified. **State-only enforceable conditions are:** Permit Condition Number(s): Section II, Condition 4.6 and Section IV, Conditions 3.g (last paragraph), 14 and 18 (as noted).

1.5 All information gathered pursuant to the requirements of this permit is subject to the Record keeping and Reporting requirements listed under Condition 22 of the General Conditions in Section IV of this permit.

2. Non-Attainment New Source Review (NANSR) and Prevention of Significant Deterioration (PSD)

2.1 This facility is categorized as a NANSR major stationary source (Potential to Emit of VOC and $NO_X \geq 100$ Tons/Year). Future modifications at this facility resulting in a significant net emissions increase (see Reg 3, Part D, Sections II.A.26 and 42) for VOC or NO_X or a modification which is major by itself (Potential to Emit of ≥ 100 TPY of either VOC or NO_X) may result in the application of the NANSR review requirements.

This facility is categorized as a PSD major stationary source (Potential to Emit ≥ 250 Tons/Year for NO_X and CO. Future modifications at this facility resulting in a significant net emissions increase (see Reg 3, Part D, Sections II.A.26 and 42) or a modification which is major by itself (Potential to Emit of ≥ 250 TPY) for any pollutant listed in Regulation No. 3, Part D, Section II.A.42 for which the area is in attainment or attainment/maintenance may result in the application of the PSD review requirements.

2.2 There are no other Operating Permits associated with this plant for the purposes of determining the applicability of the PSD regulations.

3. Accidental Release Program (112(r))

3.1 Based on the information provided by the applicant, this facility is subject to the provisions of the Accidental Release Prevention Program (Section 112 (r) of the Federal Clean Air Act).

4. Alternative Operating Scenarios (ver 10/1/2011)

The following Alternative Operating Scenario (AOS) for the temporary and permanent replacement of natural gas fired reciprocating internal combustion engines has been reviewed in accordance with the requirements of Regulation No. 3., Part A, Section IV.A, Operational Flexibility-Alternative Operating Scenarios, Regulation No. 3, Part B, Construction Permits, and Regulation No. 3, Part D, Major Stationary Source New Source Review and Prevention of Significant Deterioration, and it has been found to meet all applicable substantive and procedural requirements. This permit incorporates and shall be considered a Construction Permit for any engine replacement performed in accordance with this AOS, and the permittee shall be allowed to perform such engine replacement without applying for a revision to this permit or obtaining a new Construction Permit.

4.1 Engine Replacement

The following AOS is incorporated into this permit in order to deal with a compressor engine breakdown or periodic routine maintenance and repair of an existing onsite engine that requires the use of either a temporary or permanent replacement engine. "Temporary" is defined as in the same service for 90 operating days or less in any 12 month period. "Permanent" is defined as in the same service for more than 90 operating days in any 12 month period. The 90 days is the total number of days that the engine is in operation. If the engine operates only part of a day, that day shall count as a single day towards the 90-day total. The compliance demonstrations and any periodic monitoring required by this AOS are in addition to any compliance demonstrations or periodic monitoring required by this permit

All replacement engines are subject to all federally applicable and state-only requirements set forth in this permit (including monitoring and record keeping), and shall be subject to any shield afforded by this permit

The results of all tests and the associated calculations required by this AOS shall be submitted to the Division within 30 calendar days of the test or within 60 days of the test if such testing is required to demonstrate compliance with NSPS or MACT requirements. Results of all tests shall be kept on site for five (5) years and made available to the Division upon request.

The permittee shall maintain a log on-site and contemporaneously record the start and stop date of any engine replacement, the manufacturer, date of manufacture, model number, horsepower, and serial number of the engine(s) that are replaced during the term of this permit, and the manufacturer, model number, horsepower, and serial number of the replacement engine. In addition to the log, the permittee shall maintain a copy of all Applicability Reports required under section 2.1.2 and make them available to the Division upon request.

4.1.1 The permittee may **temporarily** replace an existing compressor engine that is subject to the emission limits set forth in this permit with an engine that is of the same manufacturer, model, and horsepower or a different manufacturer, model, or horsepower as the existing engine without modifying this permit, so long as the temporary replacement engine complies with all permit limitations and other requirements applicable to the existing engine. Measurement of emissions from the temporary replacement engine shall be made as set forth in section 2.2.

The permittee may temporarily replace a grandfathered or permit exempt engine or an engine that is not subject to emission limits without modifying this permit. In this circumstance, potential annual emissions of NO_x and CO from the temporary replacement engine must be less than or equal to the potential annual emissions of NO_x and CO from the original grandfathered or permit exempt engine or for the engine that is not subject to emission limits, as determined by applying appropriate emission factors (e.g. AP-42 or manufacturer's emission factors)

4.1.2 The permittee may **permanently** replace the existing compressor engine for the emission points specified in Table 1 with the manufacturer, model, and horsepower engines listed

in Table 1 without modifying this permit so long as the permanent replacement engine complies with all permit limitations and other requirements applicable to the existing engine as well as any new applicable requirements for the replacement engine. Measurement of emissions from the permanent replacement engine and compliance with the applicable emission limitations shall be made as set forth in section 2.2.

An Air Pollutant Emissions Notice (APEN) that includes the specific manufacturer, model and serial number and horsepower of the permanent replacement engine shall be filed with the Division for the permanent replacement engine within 14 calendar days of commencing operation of the replacement engine. The APEN shall be accompanied by the appropriate APEN filing fee, a cover letter explaining that the permittee is exercising an alternative operating scenario and is installing a permanent replacement engine, and a copy of the relevant Applicability Reports for the replacement engine. Example Applicability Reports can be found in Appendix A. This submittal shall be accompanied by a certification from the Responsible Official indicating that "based on the information and belief formed after reasonable inquiry, the statements and information included in the submittal are true, accurate and complete".

This AOS cannot be used for permanent engine replacement of a grandfathered or permit exempt engine or an engine that is not subject to emission limits.

The permittee shall agree to pay fees based on the normal permit processing rate for review of information submitted to the Division in regard to any permanent engine replacement.

4.2 Portable Analyzer Testing

Note: In some cases there may be conflicting and/or duplicative testing requirements due to overlapping Applicable Requirements. In those instances, please contact the Division Field Services Unit to discuss streamlining the testing requirements.

Note that the testing required by this Condition may be used to satisfy the periodic testing requirements specified by the permit for the relevant time period (i.e. if the permit requires quarterly portable analyzer testing, this test conducted under the AOS will serve as the quarterly test and an additional portable analyzer test is not required for another three months).

The permittee may conduct a reference method test, in lieu of the portable analyzer test required by this Condition, if approved in advance by the Division.

The permittee shall measure nitrogen oxide (NO_X) and carbon monoxide (CO) emissions in the exhaust from the replacement engine using a portable flue gas analyzer *within seven (7) calendar days of commencing operation of the replacement engine*.

All portable analyzer testing required by this permit shall be conducted using the Division's Portable Analyzer Monitoring Protocol (ver March 2006 or newer).

Results of the portable analyzer tests shall be used to monitor the compliance status of this unit.

For comparison with an annual (tons/year) or short term (lbs/unit of time) emission limit, the results of the tests shall be converted to a lb/hr basis and multiplied by the allowable operating hours in the month or year (whichever applies) in order to monitor compliance. If a source is not limited in its hours of operation the test results will be multiplied by the maximum number of hours in the month or year (8760), whichever applies.

For comparison with a short-term limit that is either input based (lb/mmBtu), output based (g/hp-hr) or concentration based (ppmvd @ 15% O_2) that the existing unit is currently subject to or the replacement engine will be subject to, the results of the test shall be converted to the appropriate units as described in the above-mentioned Portable Analyzer Monitoring Protocol document.

If the portable analyzer results indicate compliance with both the NO_X and CO emission limitations, in the absence of credible evidence to the contrary, the source may certify that the engine is in compliance with both the NO_X and CO emission limitations for the relevant time period.

Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, if the portable analyzer results fail to demonstrate compliance with either the NO_X or CO emission limitations, the engine will be considered to be out of compliance from the date of the portable analyzer test until a portable analyzer test indicates compliance with both the NO_X and CO emission limitations or until the engine is taken offline

4.3 Applicable Regulations for Permanent Engine Replacements

4.3.1 Reasonably Available Control Technology (RACT): Reg 3, Part B § II.D.2

All permanent replacement engines that are located in an area that is classified as attainment/maintenance or nonattainment must apply Reasonably Available Control Technology (RACT) for the pollutants for which the area is attainment/maintenance or nonattainment. Note that both VOC and NO_X are precursors for ozone. RACT shall be applied for any level of emissions of the pollutant for which the area is in attainment/maintenance or nonattainment, except as follows:

In the Denver Metropolitan PM_{10} attainment/maintenance area, RACT applies to PM_{10} at any level of emissions and to NO_X and SO_2, as precursors to PM_{10}, if the potential to emit of NO_X or SO_2 exceeds 40 tons/yr.

For purposes of this AOS, the following shall be considered RACT for natural-gas fired reciprocating internal combustion engines:

VOC: The emission limitations in NSPS JJJJ
CO: The emission limitations in NSPS JJJJ
NO_X: The emission limitations in NSPS JJJJ
SO_2: Use of natural gas as fuel
PM_{10}: Use of natural gas as fuel

As defined in 40 CFR Part 60 Subparts GG (§ 60.331) and 40 CFR Part 72 (§ 72.2), natural gas contains 20.0 grains or less of total sulfur per 100 standard cubic feet.

4.3.2 Control Requirements and Emission Standards: Regulation No. 7, Sections XVI. and XVII.E (State-Only conditions).

Control Requirements: Section XVI

Any permanent replacement engine located within the boundaries of an ozone nonattainment area is subject to the applicable control requirements specified in Regulation No. 7, section XVI, as specified below:

Rich burn engines with a manufacturer's design rate greater than 500 hp shall use a non-selective catalyst and air fuel controller to reduce emission.

Lean burn engines with a manufacturer's design rate greater than 500 hp shall use an oxidation catalyst to reduce emissions.

The above emission control equipment shall be appropriately sized for the engine and shall be operated and maintained according to manufacturer specifications.

The source shall submit copies of the relevant Applicability Reports required under Condition 2.1.2.

Emission Standards: Section XVII.E – State-only requirements

Any permanent engine that is either constructed or relocated to the state of Colorado from another state, after the date listed in the table below shall operate and maintain each engine according to the manufacturer's written instructions or procedures to the extent practicable and consistent with technological limitations and good engineering and maintenance practices over the entire life of the engine so that it achieves the emission standards required in the table below:

Max Engine HP	Construction or Relocation Date	Emission Standards in G/hp-hr		
		NO_X	CO	VOC
100<Hp<500	January 1, 2008	2.0	4.0	1.0
	January 1, 2011	1.0	2.0	0.7
500≤Hp	July 1, 2007	2.0	4.0	1.0
	July 1, 2010	1.0	2.0	0.7

The source shall submit copies of the relevant Applicability Reports required under Condition 2.1.2.

4.3.3 NSPS for stationary spark ignition internal combustion engines: 40 CFR Part 60, Subpart JJJJ

A permanent replacement engine that is manufactured on or after 7/1/09 for emergency engines greater than 25 hp, 7/1/2008 for engines less than 500 hp, 7/1/2007 for engines greater than or equal to 500 hp except for lean burn engines greater than or equal to 500

hp and less than 1,350 hp, and 1/1/2008 for lean burn engines greater than or equal to 500 hp and less than 1,350 hp are subject to the requirements of 40 CFR Part 60, Subpart JJJJ. An analysis of applicable monitoring, recordkeeping, and reporting requirements for the permanent engine replacement shall be included in the Applicability Reports required under Condition 2.1.2. Any testing required by the NSPS is in addition to that required by this AOS. Note that the initial test required by NSPS Subpart JJJJ can serve as the testing required by this AOS under Condition 2.2, if approved in advance by the Division, provided that such test is conducted within the time frame specified in Condition 2.2.

Note that under the provisions of Regulation No. 6. Part B, section I.B. that Relocation of a source from outside of the State of Colorado into the State of Colorado is considered to be a new source, subject to the requirements of Regulation No. 6 (i.e., the date that the source is first relocated to Colorado becomes equivalent to the manufacture date for purposes of determining the applicability of NSPS JJJJ requirements).

However, as of October 1, 2011 the Division has not yet adopted NSPS JJJJ. Until such time as it does, any engine subject to NSPS will be subject only under Federal law. Once the Division adopts NSPS JJJJ, there will be an additional step added to the determination of the NSPS. Under the provisions of Regulation No. 6, Part B, § I.B (which is referenced in Part A), any engine relocated from outside of the State of Colorado into the State of Colorado is considered to be a new source, subject to the requirements of NSPS JJJJ.

4.3.4 Reciprocating internal combustion engine (RICE) MACT: 40 CFR Part 63, Subpart ZZZZ

A permanent replacement engine located at either an area or major source is subject to the requirements in 40 CFR Part 63, Subpart ZZZZ. An analysis of the applicable monitoring, recordkeeping, and reporting requirements for the permanent engine replacement shall be included in the Applicability Reports required under Condition 2.1.2. Any testing required by the MACT is in addition to that required by this AOS. Note that the initial test required by the MACT can serve as the testing required by this AOS under Condition 2.2, if approved in advance by the Division, provided that such test is conducted within the time frame specified in Condition 2.2.

4.4 Additional Sources

The replacement of an existing engine with a new engine is viewed by the Division as the installation of a new emissions unit, not "routine replacement" of an existing unit. The AOS is therefore essentially an advanced construction permit review. The AOS cannot be used for additional new emission points for any site; an engine that is being installed as an entirely new emission point and not as part of an AOS-approved replacement of an existing onsite engine has to go through the appropriate Construction/Operating permitting process prior to installation.

Table 1
Internal Combustion Engine Information for the AOS

Emission Point	Replacement Engine	Periodic Monitoring?	Subject to CAM?
P160 C136	Waukesha Model L-7042 1232 HP GSI Natural Gas Fired Engine, turbocharged, 4-cycle, Standard Rich Burn w/ AFR controller	Quarterly	Yes
P161 C137	Waukesha Model L-7042 1232 HP GSI Natural Gas Fired Engine, turbocharged, 4-cycle, Standard Rich Burn w/ AFR controller	Quarterly	Yes
P162 C138	Waukesha Model L-7042 1232 HP GSI Natural Gas Fired Engine, turbocharged, 4-cycle, Standard Rich Burn w/ AFR controller	Quarterly	Yes
P163 C147	Waukesha Model L-7042 1232 HP GSI Natural Gas Fired Engine, turbocharged, 4-cycle, Standard Rich Burn w/ AFR controller	Quarterly	Yes
P164 C139	Waukesha Model L-7042 1000 HP GSI Natural Gas Fired Engine, turbocharged, 4-cycle, Standard Rich Burn w/ AFR controller	Quarterly	Yes
P165 C140	Waukesha Model L-7042 1000 HP GSI Natural Gas Fired Engine, turbocharged, 4-cycle, Standard Rich Burn w/ AFR controller	Quarterly	Yes
P166 C141	Waukesha Model L-7042 1232 HP GSI Natural Gas Fired Engine, turbocharged, 4-cycle, Standard Rich Burn w/ AFR controller	Quarterly	Yes
P168 C217	Caterpillar Model G-342 NA, 230 HP, standard rich burn, turbocharged, low emission design, natural gas fired engine w/ AFR	Quarterly	No
P169 C153	Waukesha Model L-7042 GU, 1000 HP, standard rich burn, turbocharged, 4-cycle, natural gas fired engine w/ AFR	Semi-annually	Yes
P170 C215	Superior Ajax Model 8SGTB, 1215 HP, lean burn, turbocharged, natural gas fired engine w/oxidation catalyst and AFR	Quarterly	No
P171 C212	Superior Model 6G825, 600 HP, standard rich burn, turbocharged, natural gas fired engine w/ AFR & NSCR	Semi-annually	No
CIG-S-2 C221	Superior Model 6G825, 474 HP, standard rich burn, natural gas fired engine w/ AFR	Quarterly	No

5. Compliance Assurance Monitoring (CAM)

5.1 The following emission points at this facility use a control device to achieve compliance with an emission limitation or standard to which they are subject and have pre-control emissions that exceed or are equivalent to the major source threshold. They are therefore subject to the provisions of the CAM program as set forth in 40 CFR Part 64, as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV:

Pre-controlled NO_X and CO emissions from each of the eight (8) Waukesha Model L-7042 GSI engines are above the major source level. The control devices on the engines are used to meet their NO_X, and CO emission limitations, therefore CAM applies to these units.

6. Summary of Emission Units

6.1 The emissions units regulated by this permit are the following:

AIRS Stack Number	Plant Identifier	Description	Size *	Pollution Control Device	Construction Permit
051	P160 C136	Waukesha Model L-7042 GSI Natural Gas Fired Internal Combustion Reciprocating Engine, turbocharged, 4-cycle, Standard Rich Burn w/ air/fuel ratio controller, powering a natural gas compressor. SN 240413	1232 HP	Non-Selective Catalytic Reduction	None
052	P161 C137	Waukesha Model L-7042 GSI Natural Gas Fired Internal Combustion Reciprocating Engine, turbocharged, 4-cycle, Standard Rich Burn w/ air/fuel ratio controller, powering a natural gas compressor. SN 350086	1232 HP	Non-Selective Catalytic Reduction	
053	P162 C138	Waukesha Model L-7042 GSI Natural Gas Fired Internal Combustion Reciprocating Engine, turbocharged, 4-cycle, Standard Rich Burn w/ air/fuel ratio controller, powering a natural gas compressor. SN 367248	1232 HP	Non-Selective Catalytic Reduction	
081	P163 C147	Waukesha Model L-7042 GSI Natural Gas Fired Internal Combustion Reciprocating Engine, turbocharged, 4-cycle, Standard Rich Burn w/ air/fuel ratio controller, powering a natural gas compressor. SN 286440	1232 HP	Non-Selective Catalytic Reduction	09WE0195
055	P164 C139	Waukesha Model L-7042 GSI Natural Gas Fired Internal Combustion Reciprocating Engine, turbocharged, 4-cycle, Standard Rich Burn w/ air/fuel ratio controller, powering a natural gas compressor. SN 335792	1000 HP	Non-Selective Catalytic Reduction	None
056	P165 C140	Waukesha Model L-7042 GSI Natural Gas Fired Internal Combustion Reciprocating Engine, turbocharged, 4-cycle, Standard Rich Burn w/ air/fuel ratio controller, powering a natural gas compressor. SN 288108	1000 HP	Non-Selective Catalytic Reduction	
057	P166 C141	Waukesha Model L-7042 GSI Natural Gas Fired Internal Combustion Reciprocating Engine, turbocharged, 4-cycle, Standard Rich Burn w/ air/fuel ratio controller, powering a natural gas compressor. SN 260958	1232 HP	Non-Selective Catalytic Reduction	

AIRS Stack Number	Plant Identifier	Description	Size *	Pollution Control Device	Construction Permit
059	P168 C217	Caterpillar Model G-342 NA Natural Gas Fired Internal Combustion Reciprocating Engine, turbocharged, 4-cycle, Standard Rich Burn ; low emissions design; equipped w/ air/fuel ratio controller; powering a residue gas compressor. SN 71B03385	230 HP	Non-Selective Catalytic Reduction	None
060	P169 C153	Waukesha Model L-7042 GU Natural Gas Fired Internal Combustion Reciprocating Engine, turbocharged, 4-cycle, Standard Rich Burn w/ air/fuel ratio controller, powering a natural gas compressor. SN 277151	1000 HP	Non-Selective Catalytic Reduction	
061	P170 C215	Superior Ajax Model 8SGTB Natural Gas Fired Internal Combustion Reciprocating Engine, turbocharged, 4-cycle, Lean Burn, low NOx design; equipped w/oxidation catalyst and air/fuel ratio controller; powering a low pressure residue gas compressor. SN 315909	1215 HP	Oxidation Catalyst	
062	P171 C212	Superior Model 6G825 Natural Gas Fired Internal Combustion Reciprocating Engine, turbocharged, 4-cycle, Standard Rich Burn; equipped w/ air/fuel ratio controller; powering a low pressure residue gas compressor. SN 19941	600 HP	Non-Selective Catalytic Reduction	
063	P178	Weatherford Natural Gas Dehydration System using triethylene glycol; gas pressure at 850 PSI; gas temperature of 95° F. SN 34418	10 MMscf/day	Condenser Reboiler/Flare	
064	P179	OPF-HMO natural gas fired heater for heating hot oil; Serial No. J87426	15 MMBtu/Hr	None	
034	P181	Gas Plant Fugitive Emissions	N/A	None	
066	P182	Condensate Truck Load-out	N/A	None	
067	P183	Four (4) Condensate Storage Tanks	300 bbl each	None	
075	CIG-S-2 C-221	Superior Model 6G825 Natural Gas Fired Internal Combustion Reciprocating Engine, 4-cycle, Standard Rich Burn ; powering a natural gas compressor. SN 18653	474 HP	Non-Selective Catalytic Reduction	

* All horsepower (HP) values are site rated values as reported in APEN submittals

SECTION II - Specific Permit Terms

1. Natural Gas Fired Internal Combustion Engines with AFR and NSCR > 500 HP

P160/C136 – Waukesha 1232 HP Compressor Engine
P161/C137 – Waukesha 1232 HP Compressor Engine
P165/C140 – Waukesha 1000 HP Compressor Engine
P166/C141 – Waukesha 1232 HP Compressor Engine

Note: These limitations apply to **each engine**.

Parameter	Permit Condition Number	Limitations	Controlled Emission Factor (lb/MMBtu)	Monitoring	
				Method	Interval
NO_X	1.1	39.6 TPY	0.968	Recordkeeping & Calculation 12 month rolling	Monthly
CO		39.6 TPY	0.968		
VOC	1.2	9.7 TPY	0.236		
Natural Gas Consumption	1.3	78.7 MMscf/yr			
Btu Content of Natural Gas	1.4			ASTM, EPA or other Division Approved Methods	Semi-Annually
Hours of Operation	1.5			Recordkeeping	Monthly
Opacity	1.6	Not to Exceed 20% Except as Provided for Below		Fuel Restriction	Only Natural Gas is Used a Fuel
		For Startup – Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes			
NESHAP Subpart ZZZZ	1.7	Limit Formaldehyde concentrations to 2.7 ppmvd @ 15% O_2 or Reduce Formaldehyde by 76%		See Condition 1.7	
NESHAP Subpart A	1.8			See Condition 1.8	
Control Device	1.9			See Condition 1.9	
CAM	1.10			See Condition 1.10	

P162/C138 – Waukesha 1232 HP Compressor Engine

Parameter	Permit Condition Number	Limitations	Controlled Emission Factor (lb/MMBtu)	Monitoring	
				Method	Interval
NO_X	1.1	23.8 TPY	0.582	Recordkeeping & Calculation 12 month rolling	Monthly
CO		39.6 TPY	0.968		
VOC	1.2	9.7 TPY	0.236		
Natural Gas Consumption	1.3	78.7 MMscf/yr			
Btu Content of Natural Gas	1.4			ASTM, EPA or other Division Approved Methods	Semi-Annually
Hours of Operation	1.5			Recordkeeping	Monthly
Opacity	1.6	Not to Exceed 20% Except as Provided for Below		Fuel Restriction	Only Natural Gas is Used a Fuel
		For Startup – Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes			
NESHAP Subpart ZZZZ	1.7	Limit Formaldehyde concentrations to 2.7 ppmvd @ 15% O_2 or Reduce Formaldehyde by 76%		See Condition 1.7	
NESHAP Subpart A	1.8			See Condition 1.8	
Control Device	1.9			See Condition 1.9	
CAM	1.10			See Condition 1.10	

P163/C147 – Waukesha 1232 HP Compressor Engine

Parameter	Permit Condition Number	Limitations	Controlled Emission Factor (lb/MMBtu)	Monitoring	
				Method	Interval
NO_X	1.1	23.8 TPY	0.473	Recordkeeping & Calculation 12 month rolling	Monthly
CO		23.8 TPY	0.473		
VOC	1.2	6.0 TPY	0.119		
Natural Gas Consumption	1.3	96.9 MMscf/yr			
Btu Content of Natural Gas	1.4			ASTM, EPA or other Division Approved Methods	Semi-Annually
Hours of Operation	1.5			Recordkeeping	Monthly
Opacity	1.6	Not to Exceed 20% Except as Provided for Below		Fuel Restriction	Only Natural Gas is Used a Fuel
		For Startup – Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes			
NESHAP Subpart ZZZZ	1.7	Limit Formaldehyde concentrations to 2.7 ppmvd @ 15% O_2 or Reduce Formaldehyde by 76%		See Condition 1.7	
NESHAP Subpart A	1.8			See Condition 1.8	
Control Device	1.9			See Condition 1.9	
CAM	1.10			See Condition 1.10	

P164/C139 – Waukesha 1000 HP Compressor Engine

Parameter	Permit Condition Number	Limitations	Controlled Emission Factor (lb/MMBtu)	Monitoring	
				Method	Interval
NO_X	1.1	19.3 TPY	0.472	Recordkeeping & Calculation 12 month rolling	Monthly
CO		38.6 TPY	0.945		
VOC	1.2	9.7 TPY	0.236		
Natural Gas Consumption	1.3	78.6 MMscf/yr			
Btu Content of Natural Gas	1.4			ASTM, EPA or other Division Approved Methods	Semi-Annually
Hours of Operation	1.5			Recordkeeping	Monthly
Opacity	1.6	Not to Exceed 20% Except as Provided for Below		Fuel Restriction	Only Natural Gas is Used a Fuel
		For Startup – Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes			
NESHAP Subpart ZZZZ	1.7	Limit Formaldehyde concentrations to 2.7 ppmvd @ 15% O_2 or Reduce Formaldehyde by 76%		See Condition 1.7	
NESHAP Subpart A	1.8			See Condition 1.8	
Control Device	1.9			See Condition 1.9	
CAM	1.10			See Condition 1.10	

P169/C153 – Waukesha 1000 HP Compressor Engine

Parameter	Permit Condition Number	Limitations	Controlled Emission Factor (lb/MMBtu)	Monitoring	
				Method	Interval
NO_X	1.1	19.3 TPY	0.472	Recordkeeping & Calculation 12 month rolling	Monthly
CO		29.0 TPY	0.708		
VOC	1.2	9.7 TPY	0.236		
Natural Gas Consumption	1.3	78.6 MMscf/yr			
Btu Content of Natural Gas	1.4			ASTM, EPA or other Division Approved Methods	Semi-Annually
Hours of Operation	1.5			Recordkeeping	Monthly
Opacity	1.6	Not to Exceed 20% Except as Provided for Below		Fuel Restriction	Only Natural Gas is Used a Fuel
		For Startup – Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes			
NESHAP Subpart ZZZZ	1.7	Limit Formaldehyde concentrations to 2.7 ppmvd @ 15% O_2 or Reduce Formaldehyde by 76%		See Condition 1.7	
NESHAP Subpart A	1.8			See Condition 1.8	
Control Device	1.9			See Condition 1.9	
CAM	1.10			See Condition 1.10	

P171/C212 – Superior 600 HP Compressor Engine

Parameter	Permit Condition Number	Limitations	Controlled Emission Factor (lb/MMBtu)	Monitoring	
				Method	Interval
NO_X	1.1	11.6 TPY	0.569	Recordkeeping & Calculation 12 month rolling	Monthly
CO		17.4 TPY	0.853		
VOC	1.2	5.8 TPY	0.284		
Natural Gas Consumption	1.3	39.2 MMscf/yr			
Btu Content of Natural Gas	1.4			ASTM, EPA or other Division Approved Methods	Semi-Annually
Hours of Operation	1.5			Recordkeeping	Monthly
Opacity	1.6	Not to Exceed 20% Except as Provided for Below		Fuel Restriction	Only Natural Gas is Used a Fuel
		For Startup – Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes			
NESHAP Subpart ZZZZ	1.7	Limit Formaldehyde concentrations to 2.7 ppmvd @ 15% O_2 or Reduce Formaldehyde by 76%		See Condition 1.7	
NESHAP Subpart A	1.8			See Condition 1.8	
Control Device	1.9			See Condition 1.9	

1.1.1 Emissions of Nitrogen Oxides (NO_X) and Carbon Monoxide (CO) from **each engine** shall not exceed the limitations stated in the tables above (Compliance Order On Consent Case Nos. 2009-007 and Colorado Construction Permit 09WE0195 for engine P163/C147). Compliance with the emission limitations shall be monitored as follows: Except as provided below, the emission factors listed above have been approved by the Division and shall be used to calculate emissions from these engines.

Monthly emissions shall be calculated by the end of the subsequent month using the above emission factor, the natural gas consumption (as required by Condition 1.3) and the Btu content of the natural gas (as required by Condition 1.4) in the equation below:

$$\text{tons/mo} = \frac{[\text{EF (lb/MMBtu)} \times \text{fuel use (MMscf/year)} \times \text{heat content of fuel (MMBtu/MMscf)}]}{2000 \text{ lb/ton}}$$

Monthly emissions shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

If the results of the portable analyzer testing conducted under the provisions of Condition 1.1.2 show that either the NO_X or CO emission rates/factors are greater than the emission rates/factors listed above, and in the absence of subsequent testing results to the contrary (as approved by the Division), the permittee shall apply for a modification to this permit to reflect, at a minimum, the higher emission rates/factors within 60 days of the completion of the test**.**

1.1.2 Portable monitoring shall be conducted for semi-annually engines P169/C153 and P171/C212 and quarterly for all other engines as required by Condition 9.

1.2 Volatile Organic Compounds (VOC) emissions from **each engine** shall not exceed the annual emission limitation stated in the tables above (Colorado Construction Permit 09WE0195 for engine P163/C147). Monthly emissions shall be calculated by the end of the subsequent month using the above emission factor the monthly natural gas consumption (as required by Condition 1.3) and the Btu content of the natural gas (as required by Condition 1.4) in the equation below:

$$\text{tons/mo} = \frac{[\text{EF (lb/MMBtu)} \times \text{fuel use (MMscf/year)} \times \text{heat content of fuel (MMBtu/MMscf)}]}{2000 \text{ lb/ton}}$$

Monthly emissions shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

1.3 Natural gas consumption from **each engine** shall not exceed the above limitation (Colorado Construction Permit 09WE0195 for engine P163/C147). Facility-wide natural gas consumption shall be recorded using the existing fuel meter on a monthly basis. The natural gas use shall be measured on the same day that run time hours have been recorded in accordance with Condition 1.5. Allocation of natural gas to each engine will be calculated using the following calculation:

Records of calculations shall be kept in a log to be made available to the Division upon request. Monthly natural gas consumption from **each engine** shall be used in a twelve month rolling total to monitor compliance with the annual limitation. Each month, a new twelve month total shall be calculated using the previous twelve months data.

1.4 The Btu content of the natural gas used to fuel these engines shall be verified semi-annually, or once every six months, using the appropriate ASTM Methods or equivalent, if approved in advance by the Division. The Btu content of the natural gas shall be based on the lower heating value of the fuel. Calculation of monthly emissions shall be made using the heat content derived from the most recent required analysis.

1.5 Hours of operation of each engine shall be recorded monthly. Records shall be made available for Division review upon request.

1.6 Visible emissions shall not exceed 20% opacity (Colorado Construction Permit 09WE0195 for engine P163/C147 and Colorado Regulation No. 1, Section II.A.1) except during periods of startup when visible emissions shall not exceed 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4). This opacity standard applies to **each engine.** In the absence of credible evidence to the contrary, compliance with the opacity limit shall be presumed since only natural gas is permitted to be used as fuel for these engines.

1.7 **[Federal-Only]** These engines are subject to the requirements in 40 CFR Part 63 Subpart ZZZZ, "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines", as follows:

Note that as of the issuance date of this permit [July 1, 2012], the provisions in 40 CFR Part 63 Subpart ZZZZ (those provisions published in the August 20, 2010 Federal Register) have not been adopted in Colorado Regulation No. 6, Part A and Colorado Regulation No. 8, Part E and are therefore not state enforceable.

Note: If there is a change in federal law which renders ineffective or alters the applicable requirements of this Subpart ZZZZ, the source shall follow the effective federal rules.

1.7.1 This facility must comply with the applicable limitations no later than October 19, 2013. (§63.6595(a)(1))

1.7.2 Formaldehyde emission from these engines shall be limited to 2.7 ppmvd at 15% O_2 **or** reduced by 76 percent or more (Table 2d of Subpart ZZZZ, Item 10).

1.7.3 For the non-selective catalytic reduction device installed to meet the requirement in Condition 1.8.2, the following operating requirements shall apply: (Table 1b of Subpart ZZZZ, Item 1)

1.7.3.1 Maintain each catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test and

1.7.3.2 Maintain the temperature of each engine's exhaust so the catalyst inlet temperature is greater than or equal to 750°F and less than or equal to 1250°F.

<u>Performance Tests</u>

1.7.4 Initial performance tests must be conducted within 180 days after the compliance date specified in Condition 1.7.1 according to the provisions of §63.7(a)(2). (§63.6612(a))

1.7.4.1 An initial performance test is not required on a unit which a performance test has previously been conducted, provided the test meets the conditions described in

§63.6612(b)(1) through (4). (§63.6612(b))

1.7.5 Performance tests must be conducted using the appropriate ASTM methods or equivalent, if approved in advance by the EPA, as described in Table 4 to Subpart ZZZZ, according to the following protocol:

1.7.5.1 Select the sampling port location and the number of traverse points

a. Sampling sites must be located at the inlet and outlet of the control device

1.7.5.2 Measure O_2 at the inlet and outlet of the control device

a. Measurements to determine O_2 concentration must be made at the same time as the measurements for formaldehyde concentration

1.7.5.3 Measure moisture content at the inlet and outlet of the control device

a. Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration

1.7.5.4 Measure formaldehyde at the inlet and the outlet of the control device

a. Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs

Demonstrating Compliance

1.7.6 Initial compliance with the requirement to limit concentration **or** reduce formaldehyde emissions in Condition 1.7.2 is demonstrated by achieving the following:

1.7.6.1 The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average formaldehyde concentration, corrected to 15% O2, dry basis, from the initial performance test is less than or equal to the emission limitation; (Table 5 of Subpart ZZZZ, Item 7.a.i or 10.a.i) and

1.7.6.2 A CPMS has been installed to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); (Table 5 of Subpart ZZZZ, Item 7.a.ii or 10.a.ii) and

1.7.6.3 The catalyst pressure drop and catalyst inlet temperature have been recorded during the initial performance test. (Table 5 of Subpart ZZZZ, Item 7.a.iii or 10.a.iii)

1.7.7 Demonstrate continuous compliance with the limitations in Condition 1.7.2 using the following methods described in Table 6 of Subpart ZZZZ. (§63.6640(a)):

1.7.7.1 Conduct performance tests according to Condition 1.7.5 every 8,760 hours or 3 years, whichever comes first, to demonstrate that the required formaldehyde concentration or percent reduction is achieved; (Table 6 of Subpart ZZZZ, Item 10.a.i) and

1.7.7.2 Collect the catalyst inlet temperature data according to §63.6625(b); (Table 6 of

Subpart ZZZZ, Item 10.a.ii) and

1.7.7.3 Reduce these data to 4-hour rolling averages; (Table 6 of Subpart ZZZZ, Item 10.a.iii) and

1.7.7.4 Maintain the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; (Table 6 of Subpart ZZZZ, Item 10.a.iv) and

1.7.7.5 Measure the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. (Table 6 of Subpart ZZZZ, Item 10.a.v)

Notification and Reporting Requirements

1.7.8 Submit compliance reports semiannually according to the requirements in §63.6650(b). The report must contain the following:

1.7.8.1 If there are no deviations from any emission limitations or operating limitations, include a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), include a statement that there were not periods during which the CMS was out-of-control during the reporting period. (Table 7 of Subpart ZZZZ, Item 1.a)

1.7.8.2 If there is a deviation from any emission limitation or operating limitation during the reporting period, include the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), include the information in §63.6650(e). (Table 7 of Subpart ZZZZ, Item 1.b)

1.7.8.3 If there was a malfunction during the reporting period, include the information in §63.6650(c)(4). (Table 7, Item 1.c)

1.7.9 Submit a Notification of Compliance Status according to §63.6645(h).

1.7.10 Submit all notifications that are applicable in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), (g) and (h). (§63.6645(a))

1.7.11 Keep records of the maintenance conducted on the engine in order to demonstrate that the engine was operated and maintained according to the maintenance plan. (§66.6655(e)).

General Requirements

1.7.12 Compliance with the emission limitations and operating limitations in this subpart must be achieved at all times. (§63.6605(a))

1.7.13 At all times the engines must be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require any further efforts to reduce emissions if

levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. (§63.6605(b))

Maintenance Requirements

1.7.14 Comply with the monitoring, installation, collection, and maintenance requirements in §63.6625.

1.7.15 Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. (§63.6625(h))

1.8 **[Federal-Only]** These engines are subject to the requirements in 40 CFR Part 63 Subpart A "General Provisions", Section I as specified in 40 CFR Part 63 Subpart ZZZZ § 63.6665. These requirements include, but are not limited to the following:

1.8.1 Prohibited activities and circumvention in § 63.4.

1.8.2 Performance testing in§63.7.

1.8.3 Monitoring in §63.8.

1.8.4 Notification in §63.9.

1.8.5 Recordkeeping and reporting in §63.10.

1.9 Each engine shall be equipped with both a non-selective catalytic reduction system and an air fuel controller (Colorado Regulation No. 7 Section XVI.B.3).

1.9.1 For **engine P171/C212 only**, the pressure drop across the catalyst and the catalyst inlet temperature shall be monitored and recorded monthly. The catalyst inlet temperature shall be kept within the manufacturer's specified range. The manufacturer's recommendations on the catalyst inlet temperature shall be made available to the Division upon request.

When portable monitoring is scheduled, the above parameters shall be recorded during the portable monitoring event.

1.9.2 The millivolt reading (AFR) for each engine will be monitored and recorded monthly to assess the air to fuel ratio controller operating condition. During those months when portable monitoring is scheduled the millivolt reading shall be monitored and recorded during the portable monitoring event. Recording of the millivolt reading shall be used to verify that the AFR controlled is operated in accordance with the manufacturer's recommendations.

1.9.3 The oxygen concentration in the engine exhaust gas shall be measured and recorded for each engine during each portable monitoring event required by Condition 1.1.2.

1.10 These engines, **except engine P171/C212**, are subject to the Compliance Assurance Monitoring (CAM) requirements with respect to the NO_X and CO emission limitations in Condition 1.1. The Compliance Assurance Monitoring (CAM) requirements in 40 CFR Part 64, as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV, apply to eight (8) Waukesha compressor engines, P160/C136, P161/C137, P162/C138, P163/C147, P164/C139, P165/C140, P166/C141, and P169/C153.

1.10.1 Excursions, for purposes of reporting are as follows:

1.10.1.1 The permittee shall follow the CAM Plan provided in Appendix I and excursions for purposes of reporting are as follows:

a. Any monthly pressure drop across the catalyst that is not within $\pm$ 2 inches of water from the baseline value established by the source when the engine is operating at maximum achievable load. This baseline pressure drop shall be established by the source during the first portable analyzer test, required by Condition 1.1.2, conducted after this revised permit issuance [July 1, 2012]. For a new, cleaned or reconditioned catalyst the new pressure drop baseline must be established by the operator within the first 7 days of engine/catalyst operation.

b. Any daily engine exhaust (catalyst inlet) temperature reading that is less than 750ºF or greater than 1250ºF

Excursions shall be reported as required by Section IV, Conditions 21 and 22.d of this permit.

1.10.2 Operation of Approved Monitoring

1.10.2.1 At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment (40 CFR Part 64 § 64.7(b), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.10.2.2 Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of these CAM requirements, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring

malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions (40 CFR Part 64 § 64.7(c), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.10.2.3 Response to excursions or exceedances

a. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable (40 CFR Part 64 § 64.7(d)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

b. Determination of whether the owner of operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process (40 CFR Part 64 § 64.7(d)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.10.2.4 After approval of the monitoring required under the CAM requirements, if the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the Division and, if necessary submit a proposed modification for this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters (40 CFR Part 64 § 64.7(e), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.10.3 Quality Improvement Plan (QIP) Requirements

1.10.3.1 Based on the results of a determination made under the provisions of Condition 1.11.2.3.b, the Division may require the owner or operator to develop and implement a QIP (40 CFR Part 64 § 64.8(a), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.10.3.2 The owner or operator shall maintain a written QIP, if required, and have it available for inspection (40 CFR Part 64 § 64.8(b)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.10.3.3 The QIP initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the owner or operator shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate:

a. Improved preventative maintenance practices (40 CFR Part 64 § 64.8(b)(2)(i), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

b. Process operation changes (40 CFR Part 64 § 64.8(b)(2)(ii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

c. Appropriate improvements to control methods (40 CFR Part 64 § 64.8(b)(2)(iii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

d. Other steps appropriate to correct control performance (40 CFR Part 64 § 64.8(b)(2)(iv), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

e. More frequent or improved monitoring (only in conjunction with one or more steps under Conditions 1.11.3.3.a through d above) (40 CFR Part 64 § 64.8(b)(2)(v), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.10.3.4 If a QIP is required, the owner or operator shall develop and implement a QIP as expeditiously as practicable and shall notify the Division if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined (40 CFR Part 64 § 64.8(c), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.10.3.5 Following implementation of a QIP, upon any subsequent determination pursuant to Condition 1.11.2.3.b, the Division or the U.S. EPA may require that an owner or operator make reasonable changes to the QIP if the QIP is found to have:

a. Failed to address the cause of the control device performance problems (40 CFR Part 64 § 64.8(d)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV); or

b. Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions (40 CFR Part 64 § 64.8(d)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.10.3.6 Implementation of a QIP shall not excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the federal clean air act (40 CFR Part 64 § 64.8(e), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.10.4 Reporting and Recordkeeping Requirements

1.10.4.1 Reporting Requirements: The reports required by Section IV, Condition 22.d, shall contain the information specified in Appendix B of the permit and the following information, as applicable:

a. Summary information on the number, duration and cause (including unknown cause, if applicable), for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable) ((40 CFR Part 64 § 64.9(a)(2)(ii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV); and

b. The owner or operator shall submit, if necessary, a description of the actions taken to implement a QIP during the reporting period as specified in Condition 1.11.3 of this permit. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring (40 CFR Part 64 § 64.9(a)(2)(iii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.10.4.2 General Recordkeeping Requirements: In addition to the recordkeeping requirements in Section IV, Condition 22.a through c.

a. The owner or operator shall maintain records of any written QIP required pursuant to Condition 1.11.3 and any activities undertaken to implement a QIP, and any supporting information required to be maintained under these CAM requirements (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions) (40 CFR Part 64 § 64.9(b)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

b. Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other

applicable recordkeeping requirements (40 CFR Part 64 § 64.9(b)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.10.5 Savings Provisions

1.10.5.1 Nothing in these CAM requirements shall excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the federal clean air act. These CAM requirements shall not be used to justify the approval of monitoring less stringent than the monitoring which is required under separate legal authority and are not intended to establish minimum requirements for the purposes of determining the monitoring to be imposed under separate authority under the federal clean air act, including monitoring in permits issued pursuant to title I of the federal clean air act. The purpose of the CAM requirements is to require, as part of the issuance of this Title V operating permit, improved or new monitoring at those emissions units where monitoring requirements do not exist or are inadequate to meet the requirements of CAM (40 CFR Part 64 § 64.10(a)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.10.5.2 Nothing in these CAM requirements shall restrict or abrogate the authority of the U.S. EPA or the Division to impose additional or more stringent monitoring, recordkeeping, testing or reporting requirements on any owner or operator of a source under any provision of the federal clean air act, including but not limited to sections 114(a)(1) and 504(b), or state law, as applicable (40 CFR Part 64 § 64.10(a)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

1.10.5.3 Nothing in these CAM requirements shall restrict or abrogate the authority of the U.S. EPA or the Division to take any enforcement action under the federal clean air act for any violation of an applicable requirement or of any person to take action under section 304 of the federal clean air act (40 CFR Part 64 § 64.10(a)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

2. Natural Gas Fired Internal Combustion Engines Equipped with AFR and NSCR < 500 HP

CIG-S-2/C221 – Superior 474 HP Compressor Engine

Parameter	Permit Condition Number	Limitations	Controlled Emission Factor (lb/MMBtu)	Monitoring	
				Method	Interval
NO_X	2.1	22.9 TPY	1.12	Recordkeeping & Calculation 12 month rolling	Monthly
CO		22.9 TPY	1.12		
VOC	2.2	4.6 TPY	0.225		
Natural Gas Consumption	2.3	39.2 MMscf/yr			
Btu Content of Natural Gas	2.4			ASTM, EPA or other Division Approved Methods	Semi-Annually
Hours of Operation	2.5			Recordkeeping	Monthly
Opacity	2.6	Not to Exceed 20% Except as Provided for Below		Fuel Restriction	Only Natural Gas is Used a Fuel
		For Startup – Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes			
NESHAP Subpart ZZZZ	2.7	Change filters and inspect spark plugs, hoses and belts		See Condition 2.7	
NESHAP Subpart A	2.8			See Condition 2.8	
Parametric Monitoring	2.9			See Condition 2.9	

P168/C217 – Catepillar 230 HP Compressor Engine

Parameter	Permit Condition Number	Limitations	Controlled Emission Factor (lb/MMBtu)	Monitoring Method	Monitoring Interval
NO_X	2.1	5.0 TPY	0.672	Recordkeeping & Calculation 12 month rolling	Monthly
CO		5.0 TPY	0.672		
VOC	2.2	2.2 TPY	0.299		
Natural Gas Consumption	2.3	14.3 MMscf/yr			
Btu Content of Natural Gas	2.4			ASTM, EPA or other Division Approved Methods	Semi-Annually
Hours of Operation	2.5			Recordkeeping	Monthly
Opacity	2.6	Not to Exceed 20% Except as Provided for Below		Fuel Restriction	Only Natural Gas is Used a Fuel
		For Startup – Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes			
NESHAP Subpart ZZZZ	2.7	Change filters and inspect spark plugs, hoses and belts		See Condition 2.7	
NESHAP Subpart A	2.8			See Condition 2.8	
Parametric Monitoring	2.9			See Condition 2.9	

2.1 Emissions of Nitrogen Oxides (NO_X) and Carbon Monoxide (CO) from **each engine** shall not exceed the limitations stated in the tables above. Compliance with the emission limitations shall be monitored as follows:

2.1.1 Except as provided below, the emission factors listed above have been approved by the Division and shall be used to calculate emissions from these engines.

Monthly emissions shall be calculated by the end of the subsequent month using the above emission factor, the natural gas consumption (as required by Condition 2.3) and the Btu content of the natural gas (as required by Condition 2.4) in the equation below:

$$\text{tons/mo} = \frac{[\text{EF (lb/MMBtu)} \times \text{fuel use (MMscf/year)} \times \text{heat content of fuel (MMBtu/MMscf)}]}{2000 \text{ lb/ton}}$$

Monthly emissions shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

If the results of the portable analyzer testing conducted under the provisions of Condition 2.1.2 show that either the NO_X or CO emission rates/factors are greater than the emission rates/factors listed above, and in the absence of subsequent testing results to the contrary (as approved by the Division), the permittee shall apply for a modification to this permit to reflect, at a minimum, the higher emission rates/factors within 60 days of the completion of the test**.**

2.1.2 Portable monitoring shall be conducted quarterly as required by Condition 9.

2.2 Volatile Organic Compounds (VOC) emissions from **each engine** shall not exceed the annual emission limitation stated in the tables above. Monthly emissions shall be calculated by the end of the subsequent month using the above emission the monthly natural gas consumption (as required by Condition 2.3) and the Btu content of the natural gas (as required by Condition 2.4) in the equation below:

$$\text{tons/mo} = \frac{[\text{EF (lb/MMBtu)} \times \text{fuel use (MMscf/year)} \times \text{heat content of fuel (MMBtu/MMscf)}]}{2000 \text{ lb/ton}}$$

Monthly emissions shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

2.3 Natural gas consumption from **each engine** shall not exceed the above limitation. Facility-wide natural gas consumption shall be recorded using the existing fuel meter on a monthly basis. The natural gas use shall be measured on the same day that run time hours have been recorded in accordance with Condition 2.5. Allocation of natural gas to each engine will be calculated using the following calculation:

Records of calculations shall be kept in a log to be made available to the Division upon request. Monthly natural gas consumption from **each engine** shall be used in a twelve month rolling total to monitor compliance with the annual limitation. Each month, a new twelve month total shall be calculated using the previous twelve months data.

2.4 The Btu content of the natural gas used to fuel these engines shall be verified semi-annually using the appropriate ASTM Methods or equivalent, if approved in advance by the Division. The Btu content of the natural gas shall be based on the lower heating value of the fuel. Calculation of monthly emissions shall be made using the heat content derived from the most recent required analysis.

2.5 Hours of operation of each engine shall be recorded monthly. Records shall be made available for Division review upon request.

2.6 Visible emissions shall not exceed 20% opacity (Colorado Regulation No. 1, Section II.A.1) except during periods of startup when visible emissions shall not exceed 30% opacity for a

period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4). This opacity standard applies to **each engine.** In the absence of credible evidence to the contrary, compliance with the opacity limit shall be presumed since only natural gas is permitted to be used as fuel for these engines.

2.7 **[Federal-Only]** These engines are subject to the requirements in 40 CFR Part 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE), as follows:

These requirements included in this Condition 2.7 are only federally enforceable. As of the date of revised permit issuance [July 1, 2012], the requirements in 40 CFR Part 63 Subpart ZZZZ promulgated on August 20, 2010 have not been adopted into Colorado Regulation No. 8, Part E by the Division and are therefore not state-enforceable.

Note: If there is a change in federal law which renders ineffective or alters the applicable requirements of this Subpart ZZZZ, the source shall follow the effective federal rules.

2.7.1 This facility must comply with the applicable operating limitations no later than October 19, 2013. (§63.6595(a)(1))

Operational Requirements

2.7.2 The following requirements apply to each non-emergency, non-black start, four-stroke rich burn spark ignition stationary RICE ≤ 500 HP: (40 CFR Part 63 Subpart ZZZZ Table 2d)

2.7.2.1 Change oil and filter every 1,440 hours of operation or annually, whichever comes first (Table 2d, item 9.a)

a. Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Condition 2.7.2.1. (Table 2d, footnote 1)

2.7.2.2 Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first (Table 2d, item 9.b)

2.7.2.3 Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary (Table 2d, item 9.c)

2.7.2.4 During periods of startup minimize the engine's time spent idle and minimize the engine's startup time to a period need for appropriate and safe loading of the engine, not to exceed 30 minutes. (Table 2d)

2.7.3 Operate and maintain the engine according to the manufacturer's emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. (§63.6625(e)(4))

General Requirements

2.7.4 Compliance with the emission limitations and operating limitations in this subpart must be achieved at all times. (§63.6605(a))

2.7.5 At all times the engines must be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. (§63.6605(b))

Continuous Compliance Requirements

2.7.6 Demonstrate continuous compliance with the operating limitations in Condition 2.6.2 using the work and management practices described in Condition 2.6.3. (§63.6640(a))

2.7.7 Report each instance in which the maintenance requirements of Condition 2.6.2 were not met. These instances are deviations and must be reported according to the requirements of §63.6650. (§63.6640(b))

Notifications and Records

2.7.8 Keep records of the maintenance conducted on the engine in order to demonstrate that the engine was operated and maintained according to the maintenance plan. (§66.6655(e)).

2.8 **[Federal-Only]** This engine is subject to the requirements in 40 CFR part 63 Subpart A "General Provisions", as specified in 40 CFR Part 63 Subpart ZZZZ § 63.6665. These requirements include, but are not limited to the following:

2.8.1 Prohibited activities in § 63.4(a).

2.8.2 Circumvention in § 63.4(b)

2.9 Parameters associated with the air-to-fuel ratio controller (AFR) and non-selective catalyst reduction unit shall be monitored as follows:

2.9.1 The millivolt reading (AFR) will be monitored and recorded monthly to assess the air to fuel ratio controller operating condition. Recording of the millivolt reading shall be used to verify that the AFR controller is operated in accordance with the manufacturer's recommendations.

2.9.2 The pressure drop across the catalyst shall be monitored and recorded monthly.

2.9.3 The catalyst inlet temperature shall be monitored and recorded monthly and kept within the manufacturer's specified range. The manufacturer's recommendations on the catalyst inlet temperature shall be made available to the Division upon request.

2.9.4 When portable monitoring is scheduled, the above parameters in Conditions 2.9.1 through 2.9.3 shall be recorded during the portable monitoring event.

2.9.5 The oxygen concentration in the engine exhaust gas shall be measured and recorded during each portable monitoring event required by Condition 2.1.2.

3. Natural Gas Fired Internal Combustion Engines with Oxidation Catalyst

P170/C215 – Superior Ajax 1215 HP Compressor Engine

Parameter	Permit Condition Number	Limitations	Controlled Emission Factor (lb/MMBtu)	Monitoring Method	Monitoring Interval
NO_X	3.1	23.5 TPY	0.606	Recordkeeping & Calculation 12 month rolling	Monthly
CO		46.9 TPY	1.211		
VOC	3.2	23.5 TPY	0.606		
Natural Gas Consumption	3.3	74.5 MMscf/yr			
Btu Content of Natural Gas	3.4			ASTM, EPA or other Division Approved Methods	Semi-Annually
Hours of Operation	3.5			Recordkeeping	Monthly
Opacity	3.6	Not to Exceed 20% Except as Provided for Below		Fuel Restriction	Only Natural Gas is Used a Fuel
		For Startup – Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes			
NESHAP Subpart ZZZZ	3.7	Limit CO concentrations to 47 ppmvd @ 15% O_2 or Reduce CO by 93%		See Condition 3.7	
NESHAP Subpart A	3.8			See Condition 3.8	
Control Device	3.9			See Condition 3.9	

3.1 Emissions of Nitrogen Oxides (NO_X) and Carbon Monoxide (CO) shall not exceed the limitations stated above. Compliance with the emission limitations shall be monitored as follows:

3.1.1 Except as provided below, the emission factors listed have been approved by the Division and shall be used to calculate emissions.

Monthly emissions shall be calculated by the end of the subsequent month using the above emission factor, the natural gas consumption (as required by Condition 3.3) and the Btu content of the natural gas (as required by Condition 3.4) in the equation below:

$$\text{ton/mo} = \frac{[\text{EF (lb/MMBtu)} \times \text{fuel use (MMscf/year)} \times \text{heat content of fuel (MMBtu/MMscf)}]}{2000 \text{ lb/ton}}$$

Monthly emissions shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

If the results of the portable analyzer testing conducted under the provisions of Condition 3.1.2 show that either the NO_X or CO emission rates/factors are greater than the emission rates/factors listed above, and in the absence of subsequent testing results to the contrary (as approved by the Division), the permittee shall apply for a modification to this permit to reflect, at a minimum, the higher emission rates/factors within 60 days of the completion of the test**.**

3.1.2 Portable monitoring shall be conducted quarterly as required by Condition 9.

3.2 Volatile Organic Compounds (VOC) emissions shall not exceed the annual emission limitation stated above. Monthly emissions shall be calculated by the end of the subsequent month using the above emission the monthly natural gas consumption (as required by Condition 3.3) and the Btu content of the natural gas (as required by Condition 3.4) in the equation below:

$$\text{tons/mo} = \frac{[\text{EF (lb/MMBtu)} \times \text{fuel use (MMscf/year)} \times \text{heat content of fuel (MMBtu/MMscf)}]}{2000 \text{ lb/ton}}$$

Monthly emissions shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

3.3 Natural gas consumption shall not exceed the above limitation. Facility-wide natural gas consumption shall be recorded using the existing fuel meter on a monthly basis. The natural gas use shall be measured no on the same day that run time hours have been recorded in accordance with Condition 3.5. Allocation of natural gas will be calculated using the following calculation:

Records of calculations shall be kept in a log to be made available to the Division upon request. Monthly natural gas consumption shall be used in a twelve month rolling total to monitor compliance with the annual limitation. Each month, a new twelve month total shall be calculated using the previous twelve months data.

3.4 The Btu content of the natural gas used to fuel the engine shall be verified semi-annually using the appropriate ASTM Methods or equivalent, if approved in advance by the Division. The Btu content of the natural gas shall be based on the lower heating value of the fuel. Calculation of monthly emissions shall be made using the heat content derived from the most recent required analysis.

3.5 Hours of operation shall be recorded monthly. Records shall be made available for Division review upon request.

3.6 Visible emissions shall not exceed 20% opacity except during periods of startup when visible emissions shall not exceed 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4). In the absence of credible evidence to the contrary, compliance with the opacity limit shall be presumed since only natural gas is permitted to be used as fuel for this engine.

3.7 **[Federal-Only]** This engine is subject to the requirements in 40 CFR Part 63 Subpart ZZZZ, "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines", as follows:

These requirements included in this Condition 3.7 are only federally enforceable. As of the date of revised permit issuance [July 1, 2012], the requirements in 40 CFR Part 63 Subpart ZZZZ promulgated on August 20, 2010 have not been adopted into Colorado Regulation No. 8, Part E by the Division and are therefore not state-enforceable.

Note: If there is a change in federal law which renders ineffective or alters the applicable requirements of this Subpart ZZZZ, the source shall follow the effective federal rules.

3.7.1 This facility must comply with the applicable limitations no later than October 19, 2013. (§63.6595(a)(1))

3.7.2 Carbon Monoxide (CO) emission shall be limited to 47 ppmvd at 15% O_2 **or** reduced by 93 percent or more (Table 2d of Subpart ZZZZ, Item 8).

3.7.3 For the oxidizing catalytic reduction device installed to meet the requirement in Condition 3.7.2, the following operating requirements shall apply (Table 2b of Subpart ZZZZ, Item 1):

3.7.3.1 Maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test and

3.7.3.2 Maintain the temperature of the engine's exhaust so the catalyst inlet temperature is greater than or equal to 450°F and less than or equal to 1350°F.

Performance Tests

3.7.4 Initial performance tests must be conducted within 180 days after the compliance date specified in Condition 3.7.1 according to the provisions of §63.7(a)(2). (§63.6612(a))

3.7.4.1 An initial performance test is not required on a unit which a performance test has previously been conducted, provided the test meets the conditions described in §63.6612(b)(1) through (4). (§63.6612(b))

3.7.4.2 Catalyst pressure drop and catalyst inlet temperature shall be recorded during the initial performance test.

3.7.5 Performance tests must be conducted using the appropriate ASTM methods or equivalent, if approved in advance by the EPA, as described in Table 4 to Subpart ZZZZ, according to the following protocol:

3.7.5.1 Measure O_2 at the inlet and outlet of the control device using a portable CO and O_2 analyzer.

a. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO concentration.

3.7.5.2 Measure CO at the inlet and the outlet of the control device using a portable CO and O_2 analyzer.

a. CO concentration must be at 15 percent O_2, dry basis.

Demonstrating Compliance

3.7.6 Initial compliance with the requirement to limit concentration **or** reduce CO emissions in Condition 3.7.2 is demonstrated by achieving the following:

3.7.6.1 The average reduction of emissions of CO determined from the initial performance test is equal to or greater than the required CO percent reduction or the average CO concentration, corrected to 15% O_2, dry basis, from the initial performance test is less than or equal to the emission limitation; (Table 5 of Subpart ZZZZ, Item 1.a.i or 2.a.i) and

3.7.6.2 A CPMS has been installed to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); (Table 5 of Subpart ZZZZ, Item 1.a.ii or 2.a.ii) and

3.7.6.3 The catalyst pressure drop and catalyst inlet temperature have been recorded during the initial performance test. (Table 5 of Subpart ZZZZ, Item 1.a.iii or 2.a.iii)

3.7.7 Demonstrate continuous compliance with the limitations in Condition 3.7.2 using the following methods described in Table 6 of Subpart ZZZZ. (§63.6640(a)):

3.7.7.1 Conduct performance tests according to Condition 3.7.5 every 8,760 hours or 3 years, whichever comes first, to demonstrate that the required CO concentration or percent reduction is achieved; (Table 6 of Subpart ZZZZ, Item 10.a.i) and

3.7.7.2 Collect the catalyst inlet temperature data according to §63.6625(b); (Table 6 of Subpart ZZZZ, Item 10.a.ii) and

3.7.7.3 Reduce these data to 4-hour rolling averages; (Table 6 of Subpart ZZZZ, Item 10.a.iii) and

3.7.7.4 Maintain the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; (Table 6 of Subpart ZZZZ, Item 10.a.iv) and

3.7.7.5 Measure the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation

established during the performance test. (Table 6 of Subpart ZZZZ, Item 10.a.v)

Notification and Reporting Requirements

3.7.8 Submit compliance reports semiannually according to the requirements in §63.6650(b). The report must contain the following:

3.7.8.1 If there are no deviations from any emission limitations or operating limitations, include a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the continuous monitoring system was out-of-control, as specified in §63.8(c)(7), include a statement that there were not periods during which the CMS was out-of-control during the reporting period. (Table 7 of Subpart ZZZZ, Item 1.a)

3.7.8.2 If there is a deviation from any emission limitation or operating limitation during the reporting period, include the information in §63.6650(d). If there were periods during which the continuous monitoring system was out-of-control, as specified in §63.8(c)(7), include the information in §63.6650(e). (Table 7 of Subpart ZZZZ, Item 1.b)

3.7.8.3 If there was a malfunction during the reporting period, include the information in §63.6650(c)(4). (Table 7, Item 1.c)

3.7.9 Submit a Notification of Compliance Status according to §63.6645(h).

3.7.10 Submit all notifications that are applicable in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), (g) and (h). (§63.6645(a))

3.7.11 Keep records of the maintenance conducted on the engine in order to demonstrate that the engine was operated and maintained according to the maintenance plan. (§66.6655(e)).

General Requirements

3.7.12 Compliance with the emission limitations and operating limitations in this subpart must be achieved at all times. (§63.6605(a))

3.7.13 At all times the engine must be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. (§63.6605(b))

Maintenance Requirements

3.7.14 Comply with the monitoring, installation, collection, and maintenance requirements in §63.6625.

3.7.15 Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. (§63.6625(h))

3.8 **[Federal-Only]** This engine is subject to the requirements in 40 CFR part 63 Subpart A "General Provisions", as specified in 40 CFR Part 63 Subpart ZZZZ § 63.6665. These requirements include, but are not limited to the following

3.8.1 Prohibited activities and circumvention in § 63.4.

3.8.2 Performance testing in §63.7.

3.8.3 Monitoring in §63.8.

3.8.4 Notification in §63.9.

3.8.5 Recordkeeping and reporting in §63.10.

3.9 This engine shall be equipped with oxidation catalyst (Colorado Regulation No. 7, XVI.B.2). Upon compliance with the requirements of Condition 3.7, the following monitoring requirements shall no longer apply. Parameters associated with the catalyst shall be monitored as follows:

3.9.1 The pressure drop across the catalyst shall be monitored and recorded monthly.

3.9.2 The catalyst inlet temperature shall be monitored and recorded monthly and kept within the manufacturer's specified range. The manufacturer's recommendations on the catalyst inlet temperature shall be made available to the Division upon request.

3.9.3 When portable monitoring is scheduled, the above parameters in Condition 3.9.1 and 3.9.2 shall be recorded during the portable monitoring event.

3.9.4 The oxygen concentration in the engine exhaust gas shall be measured and recorded during each portable monitoring event required by Condition 3.1.2.

3.9.5 All control equipment required by Condition 3.9 shall be operated and maintained pursuant to manufacturer specifications or equivalent to the extent practicable, and consistent with technological limitations and good engineering and maintenance practices. Manufacturer specifications or equivalent shall be kept on file.

4. P178 - Triethylene Glycol Regeneration Unit

Parameter	Permit Condition Number	Limitations	Emission Factor	Monitoring	
				Method	Interval
VOC	4.1	21.3 tons per year	GLYCalc 4.0 or higher	Parametric 12 month rolling	Monthly
Gas Processed	4.2	3,650.0 MMscf per year		Recordkeeping & Caclulation 12 month rolling	Monthly
Lean Glycol Pumping Rate	4.3	0.7 gallons per minute		Recordkeeping	Monthly
Extended Gas Analysis	4.4			EPA/Division Approved Methods	Annually
Days/Hours of Operation	4.5			Recordkeeping	See Condition 4.5
[State-Only] Control Device	4.6			See Condition 4.6	
NESHAP Subpart HH	4.7	< 1984 lb/yr benzene **or** < 3MMscf/day		See Condition 4.7	

4.1 VOC emissions shall not exceed the annual emission limitation stated above. Emissions of VOC and HAPs will be calculated monthly using the Gas Research Institute's GLYCalc (Version 4.0 or higher) Model. Parametric monitoring of triethylene glycol circulation rate, inlet gas pressure and inlet gas temperature for the dehydrator shall be performed to verify input to this model. Values recorded shall be representative of how the unit operated during the period. Recording interval for all parameters shall be on a monthly basis. Monthly calculation of emissions using GLYCalc will be conducted by the end of the subsequent month utilizing the gas data from the last analysis conducted as required by Condition 4.4 and the average monthly value of the monitored parameters.

Monthly VOC emissions shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

4.2 The gas processed by the glycol dehydration unit shall not exceed the limitations listed above. The gas throughput to the dehydration unit shall be recorded monthly using the existing flow meter. A twelve month rolling total will be maintained to monitor compliance with annual limitations. Records of throughput shall be kept in a log to be made available to the Division upon request. An average daily gas throughput rate shall be determined by dividing the monthly gas throughput by the number of operating days in the previous month. This average daily gas throughput rate shall be used in the monthly GLYCalc runs required by Condition 4.1.

4.3 The maximum pumping rate of lean glycol shall not exceed 0.7 gallons per minute (a pump stroke correlation can be used). Monthly records of the actual pumping rate shall be maintained by the permittee and made available to the Division for inspection upon request.

4.4 Samples of inlet gas shall be collected and analyzed (extended gas analysis) annually to determine C_1 to C_6, n-hexane, benzene, toluene, ethyl benzene and total xylene (BTEX) composition. If any of the analyses indicates the BTEX constituent concentrations exceed the values listed in the table below, frequency of extended gas analyses will become quarterly. The first quarterly sample shall be taken three months after the sample that indicated a BTEX constituent exceeded the parameters in the table was taken. Frequency of sampling and analysis will move to semi-annually after four (4) subsequent analyses and to annually after two (2) subsequent semi-annual analyses indicate that the BTEX constituents remain at or below the values in the table below.

Constituent	Value	Units	Criteria
Benzene	465	parts per million	At or Below
Toluene	212	parts per million	At or Below
Ethyl Benzene	3	parts per million	Must Not Exceed
Xylene	20	parts per million	At or Below

4.5 Days and hours of operation shall be monitored and recorded monthly in a log that is to be made available to the Division upon request. Days of operation shall be used to calculate an average daily gas throughput as specified in Condition 4.2. Hours of operation for the month shall be used in the GLYCalc runs required by Condition 4.1.

4.6 **[State-Only]** Any still vent and flash separator or flash tank shall reduce uncontrolled actual emissions of VOCs by an average of at least 90 percent through the use of air pollution control equipment. (Colorado Regulation No. 7, Section XVII.D)

4.7 The glycol dehydration units are subject to the requirements in 40 CFR Part 63 Subpart HH, "National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities", as adopted by reference in Colorado Regulation No. 8, Part E, Section III, including, but not limited to the following:

4.7.1 These dehydrators are exempt from all requirements, save recordkeeping in §63.774(d)(1), provided the criteria in Condition 4.7.1.1 or Condition 4.7.1.2 below is met: (§63.764(e)(1))

4.7.1.1 The actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere shall be less than 0.90 megagram per year, or 1984 lbs per year, as determined by the procedures specified in Condition 4.7.3 (§63.764 (e)(1)(ii)). **OR**

4.7.1.2 The actual annual average flowrate of natural gas to the glycol dehydration unit is less than 85 thousand standard cubic meters per day (3.0 MMSCF/day), as determined by the procedures specified in Condition 4.7.4 (§63.764(e)(1)(i).)

4.7.2 Records shall be kept of the actual average benzene emissions (in terms of benzene emissions per year) as determined in accordance with Condition 4.7.3 §63.772(b)(2) (§63.774(d)(1)(ii)).

4.7.3 The determination of actual average benzene emissions from this glycol dehydration unit shall be made using the procedure described in Condition 4.7.3.1 below. Emissions shall be determined with federally enforceable controls in place.

4.7.3.1 The actual average benzene emissions shall be determined using the model GRI-GLYCalc, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc, Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled "Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions" (GRI–95/0368.1) (§63.772(b)(2)(i)).

4.7.4 The determination of actual flowrate of natural gas to the glycol dehydration unit shall be made using the procedure described in Condition 4.7.3.1 below.

4.7.4.1 The facility shall install and operate a monitoring instrument that directly measures natural gas flowrate to the glycol dehydration unit with an accuracy of plus or minus 2 percent or better. The source shall convert annual natural gas flowrate to a daily average by dividing the annual flowrate by the number of days per year the glycol dehydration unit processed natural gas. (§63.722(b)(1)(i))

5. P179 - 15 MMBtu/Hr Natural Gas Fired Hot Oil Heater

Parameter	Permit Condition Number	Limitations	Emission Factors (lb/MMscf)	Monitoring	
				Method	Interval
PM	5.1	0.25 lb per MMBtu		Fuel Restriction	Only Natural Gas is Used As Fuel
NO_X	5.2	6.3 tons per year	100	Recordkeeping & Calculation 12 month rolling total	Monthly
CO		5.3 tons per year	84		
Natural Gas Consumption	5.3	126.4 MMscf per year		Fuel Meter Recordkeeping	Monthly
Opacity	5.4	Not to Exceed 20% Except as Provided Below		Fuel Restriction	Only Natural Gas is Used As Fuel
		For Startup - Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes			
NSPS General Provisions	5.5			As Required by NSPS General Provisions	

5.1 Particulate Matter (PM) emissions shall not exceed the above limitations (Colorado Regulation No. 1, Section III.A.1). In the absence of credible evidence to the contrary, compliance with the particulate matter emission limits is presumed since only natural gas is permitted to be used as fuel in the heater.

The numeric PM standards were determined using the design heat input for the heater (15 MMBtu/hr) in the following equation:

$PE = 0.5 \times (FI)^{-0.26,}$ where: PE = particulate standard in lb/MMBtu
FI = fuel input in MMBtu/hr

5.2 Emissions of NO_X, and CO shall not exceed the limitations listed above. Monthly emissions shall be calculated by the end of the subsequent month using the above emission factors (EF) (from "EPA's Compilation of Emission Factors (AP-42)", Section 1.4 (dated 3/98)) and the monthly natural gas consumption, as required by Condition 5.3 in the following equation:

$$\text{ton/mo} = \frac{[\text{EF (lb/MMscf)} \times \text{monthly natural gas consumption (MMscf/mo)}]}{2000 \text{ lb/ton}}$$

Monthly emissions shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

5.3 Natural gas consumption shall not exceed the limitations stated above. Natural gas consumed in the heater shall be recorded monthly (40 CFR Part 60 Subpart Dc §60.48c(g), as adopted by reference in Colorado Regulation No. 6, Part A). Natural gas use shall be recorded monthly using the fuel meter. Monthly natural gas consumption shall be used to calculate annual emission as required by Condition 5.2. A twelve month rolling total shall be maintained to monitor compliance with the annual limitation. Each month a new twelve month total shall be calculated using the previous twelve months data. Records of consumption shall be kept on site and made available for Division review upon request.

5.4 Visible emissions shall not exceed 20% opacity (Colorado Regulation No. 1, Section II.A.1) except during periods of startup when visible emissions shall not exceed 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4). In the absence of credible evidence to the contrary, compliance with the opacity limit shall be presumed since only natural gas is permitted to be used as fuel for this unit.

5.5 The hot oil heater is subject to the requirements in 40 CFR Part 60, Subpart A – General Provisions, as adopted by reference in Colorado Regulation No. 6, Part A, Subpart A as follows:

5.5.1 No article, machine, equipment or process shall be used to conceal an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gasses discharged to the atmosphere. (40 CFR 60 Subpart A §60.12, as adopted by reference in Colorado Regulation No. 6, Parts A, Subpart A and B, Section I.A).

5.5.2 At all times, including periods of startup, shutdown, and malfunction, owners and operators shall to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source (40 CFR Subpart A §60.11(d), as adopted by reference in Colorado Regulation No. 6, Parts A, Subparts A and B, Section I.A).

5.5.3 Records shall be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the source; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative (40 CFR Part 60 Subpart A §60.7(b), as adopted by reference in Colorado Regulation No. 6, Parts A, Subparts A and B, Section I.A).

6. P181 - Fugitive VOC Emissions from Equipment Leaks

Parameter	Permit Condition Number	Limitation	Emission Factor	Monitoring	
				Method	Interval
VOC	6.1	28.9 tons per year	By Component-EPA Protocol for Equipment Leak Estimates	EPA Method 21 Recordkeeping & Calculation	Semi-annually
Leak Detection and Repair	6.2			As defined by approved plan per Subpart KKK	
NSPS General Provisions	6.3			See Condition 6.3	

6.1 Emissions shall be calculated using the emission factors and equations listed below. Emission Factors for individual types of components in lbs/component-hr from the reference *Protocol for Equipment Leak Emission Estimates, EPA, November 1995, EPA-453/R-95-017*. These emission factors are fixed until changed by established permit modification procedures.

Component	Emission Factors (lb/component-hr)	
	Gas Service	Light Liquid
Valves	9.92×10^{-3}	5.51×10^{-3}
Connectors	4.41×10^{-4}	4.63×10^{-4}
Flanges	8.60×10^{-4}	2.43×10^{-4}
Pump Seals	5.29×10^{-3}	2.87×10^{-2}
Other*	1.94×10^{-2}	1.65×10^{-2}

*Other equipment type includes compressors, pressure relief valves, relief valves, diaphragms, drains, dump arms, hatches, instrument meters, polish rods, and vents.

Calculation of annual emissions of VOC per component:

Component count × 8760 hrs/year × VOC content (wt%) × Emission Factor × Control Factor

The total fugitive VOC emissions shall be the sum of emissions for each component.

A plant inlet gas analysis shall be performed according to appropriate ASTM or EPA approved methods at least once per calendar year. The dates of the annual inlet gas analysis shall be separated by at least two (2) calendar months. The most recent inlet gas analysis shall be used to determine the appropriate %VOC to use in the above equation.

For determining compliance the Division accepted the use of a 75 percent (%) control factor for all components except the flanges/connectors. For the flanges/connectors the Division accepted the use of a 30 percent (%) control factor.

6.1.1 The annual emission limit was based on the following component count, which includes a 10% buffer:

Component	Component Count	
	Gas Service	Liquid Service
Valves	1715	2660
Connectors	1275	3549
Flanges	464	904
Pumps		36
Other*	132	27
VOC Content (wt%)	22.5	100

*Other equipment type includes compressors, pressure relief valves, relief valves, diaphragms, drains, dump arms, hatches, instrument meters, polish rods, pumps and vents.

A running total shall then be kept of all additions and subtractions to the component count. A manual component count shall be performed at least once every five (5) calendar years as a check against the running total. The most recent running total shall be used for emission calculation purposes. The records shall be kept at the site and made available for Division review upon request.

6.2 This source is subject to 40 CFR Part 60, Subpart KKK, New Source Performance Standards (NSPS) (Adopted into Colorado Regulation No. 6, Subpart KKK): Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants. The following items apply:

6.2.1 Inspection and maintenance requirements as stated in §60.632, §60.633, and §60.634.

6.2.2 Record keeping requirements as stated in §60.635.

6.2.3 Reporting requirements as stated in §60.636. Reporting under this section is to be fulfilled concurrently with Appendix B compliance monitoring reporting and shall be submitted to the Division. In addition, the document shall detail procedures for leak detection and leak repair for the equipment and piping subject to Subpart KKK. Any changes to the document required as a result of the Division review of the document shall be accomplished as directed in writing by the Division. The document shall be retained at the plant and reviewed at least annually by the permittee and revised as necessary. The document shall be made available for Division inspection upon request. The document may be used in a compliance evaluation and determination. The requirements of Subpart KKK include a number of options and alternatives. As a minimum the document shall detail all the applicable requirements, alternatives and options to be followed, the procedures and equipment used for the testing, the instrumentation calibration and performance requirements, action levels, actions to be taken, time frames for performing the actions, reporting requirements, and provide any additional information as might be

needed to fully and completely demonstrate compliance with the Subpart KKK and Regulation No. 6, Part A, General Provisions.

6.3 Regulation No. 6, Part A, General Provisions applies as follows:

6.3.1 No article, machine, equipment or process shall be used to conceal an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentrations of a pollutant in the gasses discharged to the atmosphere (§60.12)

7. P182 - Condensate Tank Truck Loadout

Parameter	Permit Condition Number	Limitations	Emission Factor	Monitoring	
				Method	Interval
VOC	7.1	43.3 tons per year	4.81 lb/1000 gallons	Record keeping and calculation 12 month rolling total	Monthly
Condensate Throughput	7.2	18 million gallons per year			

7.1 VOC emissions from condensate truck loading shall not exceed the limitations stated above. VOC emissions shall be calculated monthly using the compliance emission factor above (calculated from methodology in AP 42 Chapter 5-2) in the following equation:

$$\text{tons/mo} = \frac{\text{EF (lb/Mgallons)} \times \text{Condensate Throughput (gallon/mo)}}{\text{1000 gallons} \times \text{2000 (lb/ton)}}$$

The parameters used to determine the emissions factor are as follows. The Division shall be notified should there be any change in these parameters that would result in a higher emission factor.

Truck Loadout Emissions (lb/1000 gallons loaded) = (12.46 x S x P x M) / (T x CF) where:

S = Saturation Factor	0.6	Submerged loading, dedicated normal service
P = Ave Vapor Pressure	5.0	psi
M = Molecular Weight	66.0	lb/lb mole
T = Average Temperature	512.45	degrees R (based on 52.45° F)
CF = Control Efficiency	1	

Monthly emissions of VOC will be used in a rolling twelve month total to monitor compliance with the annual limitation. Each month a new twelve month total shall be calculated using the previous twelve months' data.

7.2 The quantity of condensate loaded into trucks shall not exceed the limitations stated above. The quantity of condensate loaded into trucks shall be monitored and recorded monthly and used to calculate emissions as required by Condition 7.1. Monthly condensate throughput shall be the sum of all loading activities within that month. This sum will be used in a rolling twelve month total to monitor compliance with the annual limitation. Each month a new twelve month total shall be calculated using the previous twelve months' data. Records of condensate throughput shall be kept in a log to be made available to the Division upon request.

8. P183 – Stabilized Condensate Storage Tanks

Parameter	Permit Condition Number	Limitations	Emission Factor	Monitoring	
				Method	Interval
VOC	8.1	18.0 tons per year	2.0 lb/Mgal	Recordkeeping and calculation 12 month rolling total	Monthly
Condensate Throughput	8.2	18 million gallons per yr		Recordkeeping	Monthly

8.1 Emissions of VOC from the tank battery shall not exceed the limitations listed above. Compliance with the annual limit shall be monitored on a rolling 12-month total. The VOC emissions shall be calculated by the end of each subsequent month. Monthly emissions shall be calculated using monthly condensate production rates and the emission factor provided above (derived from EPA Tanks Model). Monthly emissions shall be used in a rolling twelve (12) month total to monitor compliance with the annual limitation. Each month a new twelve month total shall be calculated using the previous twelve months' data using the following equation:

$$\text{tons/mo} = \frac{\text{Condensate Throughput (Mgallons/month)} \times \text{EF (lb/Mgallon)}}{\text{2000 lb/ton}}$$

All calculations and compliance determinations shall be made available for Division review upon request.

8.2 The quantity of condensate processed through the tank battery shall not exceed the limit above. The quantity of condensate processed through the tank battery shall be monitored and recorded monthly and used to calculate emissions as required by Condition 8.1. The monthly quantity of condensate processed shall be used in a twelve month rolling total to monitor compliance with the annual limitation. Each month a new twelve month total shall be calculated using the previous twelve months' data.

9. Portable Monitoring (ver 6/1/06)

Emission measurements of nitrogen oxides (NO_X) and carbon monoxide (CO) shall be conducted semi-annually for engines P169/C153 and P171/C212 and quarterly for all other engines using a portable flue gas analyzer. At least one calendar month shall separate the quarterly tests and at least two months

quarter for semi-annual tests. Note that if the engine is operated for less than 100 hrs in any quarterly or semi-annual period, then the portable monitoring requirements do not apply. An EPA Reference Method test can replace a required portable analyzer test if conducted within the same test period as the portable analyzer test it replaces.

All portable analyzer testing required by this permit shall be conducted using the Division's Portable Analyzer Monitoring Protocol (ver March 2006 or newer) as found on the Division's website at: http://www.cdphe.state.co.us/ap/down/portanalyzeproto.pdf

Results of the portable analyzer tests shall be used to monitor the compliance status of this unit. For comparison with an annual or short term emission limit, the results of the tests shall be converted to a lb/hr basis and multiplied by the allowable operating hours in the month or year (whichever applies) in order to monitor compliance. If a source is not limited in its hours of operation the test results will be multiplied by the maximum number of hours in the month or year (8760), whichever applies.

If the portable analyzer results indicate compliance with both the NO_X and CO emission limitations, in the absence of credible evidence to the contrary, the source may certify that the engine is in compliance with both the NO_X and CO emission limitations for the relevant time period.

Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, if the portable analyzer results fail to demonstrate compliance with either the NO_X or CO emission limitations, the engine will be considered to be out of compliance from the date of the portable analyzer test until a portable analyzer test indicates compliance with both the NO_X and CO emission limitations or until the engine is taken offline.

For comparison with the emission rates/factors, the emission rates/factors determined by the portable analyzer tests and approved by the Division shall be converted to the same units as the emission rates/factors in the permit. If the portable analyzer tests shows that either the NO_X or CO emission rates/factors are greater than the relevant ones set forth in the permit, and in the absence of subsequent testing results to the contrary (as approved by the Division), the permittee shall apply for a modification to this permit to reflect, at a minimum, the higher emission rate/factor within 60 days of the completion of the test.

Results of all tests conducted shall be kept on site and made available to the Division upon request..

SECTION III - Permit Shield

Regulation No. 3, 5 CCR 1001-5, Part C, §§ I.A.4, V.D. & XIII.B; § 25-7-114.4(3)(a), C.R.S.

1. Specific Conditions

Based upon the information available to the Division and supplied by the applicant, the following parameters and requirements have been specifically identified as non-applicable to the facility to which this permit has been issued. This shield does not protect the source from any violations that occurred prior to or at the time of permit issuance. In addition, this shield does not protect the source from any violations that occur as a result of any modification or reconstruction on which construction commenced prior to permit issuance.

Emission Unit	Applicable Requirement	Justification
P160 Waukesha 1232 HP Engine	Reg 1.III.A.1.b – Particulate emissions from fuel-burning equipment Reg 1.VI.B.5.a – Sulfur dioxide emissions from fuel-burning equipment	Internal combustion engines are not considered fuel burning equipment for the applicable requirements of Regulation 1.
P161 Waukesha 1232 HP Engine		
P162 Waukesha 1232 HP Engine		
P163 Waukesha 1000 HP Engine		
P164 Waukesha 1000 HP Engine		
P165 Waukesha 1000 HP Engine		
P166 Waukesha 1232 HP Engine		
P168 Caterpillar 230 HP Engine		
P169 Waukesha 1000 HP Engine		
P170 Superior Ajax 1215 HP Engine		
P171 Superior 600 HP Engine		
CIG-S-2 Superior 474 HP Engine		
Plant-wide	Reg 3.B.IV.D.3 - PSD Review Requirements	Activities at this site have not yet required Prevention of Significant Deterioration (PSD) review or permitting.

2. General Conditions

Compliance with this Operating Permit shall be deemed compliance with all applicable requirements specifically identified in the permit and other requirements specifically identified in the permit as not applicable to the source. This permit shield shall not alter or affect the following:

2.1 The provisions of §§ 25-7-112 and 25-7-113, C.R.S., or § 303 of the federal act, concerning enforcement in cases of emergency;

2.2 The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance.

2.3 The applicable requirements of the federal Acid Rain Program, consistent with § 408(a) of the federal act;

2.4 The ability of the Air Pollution Control Division to obtain information from a source pursuant to § 25-7-111(2)(I), C.R.S., or the ability of the Administrator to obtain information pursuant to § 114 of the federal act;

2.5 The ability of the Air Pollution Control Division to reopen the Operating Permit for cause pursuant to Regulation No. 3, Part C, § XIII.

2.6 Sources are not shielded from terms and conditions that become applicable to the source subsequent to permit issuance.

3. Stream-lined Conditions

The following applicable requirements have been subsumed within this operating permit using the pertinent streamlining procedures approved by the U.S. EPA. For purposes of the permit shield, compliance with the listed permit conditions will also serve as a compliance demonstration for purposes of the associated subsumed requirements.

Permit Condition	Streamlined (Subsumed) Requirements
Section II, Condition 1.9	Colorado Regulation No. 7, XVII.E.3.b.(i) [install control equipment] – **State Only Requirement**
Section II, Conditions 1.10.1 and 3.10.4	Colorado Regulation No. 7, Section XVI.B.3 [operation and maintenance]
Section II, Condition 3.9	Colorado Regulation No. 7, XVII.E.3.b.(i) [install control equipment] – **State Only Requirement**
Section II, Condition 5.1	Colorado Regulation No. 6, Part B, Section II.C.2 [fuel burning equipment particulate matter requirement] – **State Only Requirement**
Section II, Condition 5.4	Colorado Regulation No. 6, Part B, Section II.C.3 [opacity of emission shall not exceed 20%] – **State Only Requirement**

SECTION IV - General Permit Conditions (ver 5/22/2012)

1. Administrative Changes

Regulation No. 3, 5 CCR 1001-5, Part A, § III.

The permittee shall submit an application for an administrative permit amendment to the Division for those permit changes that are described in Regulation No. 3, Part A, § I.B.1. The permittee may immediately make the change upon submission of the application to the Division.

2. Certification Requirements

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.B.9., V.C.16.a.& e. and V.C.17.

a. Any application, report, document and compliance certification submitted to the Air Pollution Control Division pursuant to Regulation No. 3 or the Operating Permit shall contain a certification by a responsible official of the truth, accuracy and completeness of such form, report or certification stating that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

b. All compliance certifications for terms and conditions in the Operating Permit shall be submitted to the Air Pollution Control Division at least annually unless a more frequent period is specified in the applicable requirement or by the Division in the Operating Permit.

c. Compliance certifications shall contain:

(i) the identification of each permit term and condition that is the basis of the certification;

(ii) the compliance status of the source;

(iii) whether compliance was continuous or intermittent;

(iv) method(s) used for determining the compliance status of the source, currently and over the reporting period; and

(v) such other facts as the Air Pollution Control Division may require to determine the compliance status of the source.

d. All compliance certifications shall be submitted to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit.

e. If the permittee is required to develop and register a risk management plan pursuant to § 112(r) of the federal act, the permittee shall certify its compliance with that requirement; the Operating Permit shall not incorporate the contents of the risk management plan as a permit term or condition.

3. Common Provisions

Common Provisions Regulation, 5 CCR 1001-2 §§ II.A., II.B., II.C., II.E., II.F., II.I, and II.J

a. To Control Emissions Leaving Colorado

When emissions generated from sources in Colorado cross the State boundary line, such emissions shall not cause the air quality standards of the receiving State to be exceeded, provided reciprocal action is taken by the receiving State.

b. Emission Monitoring Requirements

The Division may require owners or operators of stationary air pollution sources to install, maintain, and use instrumentation to monitor and record emission data as a basis for periodic reports to the Division.

c. Performance Testing

The owner or operator of any air pollution source shall, upon request of the Division, conduct performance test(s) and furnish the Division a written report of the results of such test(s) in order to determine compliance with applicable emission control regulations.

Performance test(s) shall be conducted and the data reduced in accordance with the applicable reference test methods unless the Division:

(i) specifies or approves, in specific cases, the use of a test method with minor changes in methodology;

(ii) approves the use of an equivalent method;

(iii) approves the use of an alternative method the results of which the Division has determined to be adequate for indicating where a specific source is in compliance; or

(iv) waives the requirement for performance test(s) because the owner or operator of a source has demonstrated by other means to the Division's satisfaction that the affected facility is in compliance with the standard. Nothing in this paragraph shall be construed to abrogate the Commission's or Division's authority to require testing under the Colorado Revised Statutes, Title 25, Article 7, and pursuant to regulations promulgated by the Commission.

Compliance test(s) shall be conducted under such conditions as the Division shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Division such records as may be necessary to determine the conditions of the performance test(s). Operations during period of startup, shutdown, and malfunction shall not constitute representative conditions of performance test(s) unless otherwise specified in the applicable standard.

The owner or operator of an affected facility shall provide the Division thirty days prior notice of the performance test to afford the Division the opportunity to have an observer present. The Division may waive the thirty day notice requirement provided that arrangements satisfactory to the Division are made for earlier testing.

The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(i) Sampling ports adequate for test methods applicable to such facility;

(ii) Safe sampling platform(s);

(iii) Safe access to sampling platform(s); and

(iv) Utilities for sampling and testing equipment.

Each performance test shall consist of at least three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic mean of results of at least three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner or operator's control, compliance may, upon the Division's approval, be determined using the arithmetic mean of the results of the two other runs.

Nothing in this section shall abrogate the Division's authority to conduct its own performance test(s) if so warranted.

d. Affirmative Defense Provision for Excess Emissions during Malfunctions

An affirmative defense to a claim of violation under these regulations is provided to owners and operators for civil penalty actions for excess emissions during periods of malfunction. To establish the affirmative defense and to be

relieved of a civil penalty in any action to enforce an applicable requirement, the owner or operator of the facility must meet the notification requirements below in a timely manner and prove by a preponderance of evidence that:

(i) The excess emissions were caused by a sudden, unavoidable breakdown of equipment, or a sudden, unavoidable failure of a process to operate in the normal or usual manner, beyond the reasonable control of the owner or operator;

(ii) The excess emissions did not stem from any activity or event that could have reasonably been foreseen and avoided, or planned for, and could not have been avoided by better operation and maintenance practices;

(iii) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded;

(iv) The amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions;

(v) All reasonably possible steps were taken to minimize the impact of the excess emissions on ambient air quality;

(vi) All emissions monitoring systems were kept in operation (if at all possible);

(vii) The owner or operator's actions during the period of excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence;

(viii) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

(ix) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions. This section is intended solely to be a factor in determining whether an affirmative defense is available to an owner or operator, and shall not constitute an additional applicable requirement; and

(x) During the period of excess emissions, there were no exceedances of the relevant ambient air quality standards established in the Commissions' Regulations that could be attributed to the emitting source.

The owner or operator of the facility experiencing excess emissions during a malfunction shall notify the division verbally as soon as possible, but no later than noon of the Division's next working day, and shall submit written notification following the initial occurrence of the excess emissions by the end of the source's next reporting period. The notification shall address the criteria set forth above.

The Affirmative Defense Provision contained in this section shall not be available to claims for injunctive relief.

The Affirmative Defense Provision does not apply to failures to meet federally promulgated performance standards or emission limits, including, but not limited to, new source performance standards and national emission standards for hazardous air pollutants. The affirmative defense provision does not apply to state implementation plan (sip) limits or permit limits that have been set taking into account potential emissions during malfunctions, including, but not necessarily limited to, certain limits with 30-day or longer averaging times, limits that indicate they apply during malfunctions, and limits that indicate they apply at all times or without exception.

e. Circumvention Clause

A person shall not build, erect, install, or use any article, machine, equipment, condition, or any contrivance, the use of which, without resulting in a reduction in the total release of air pollutants to the atmosphere, reduces or conceals an emission which would otherwise constitute a violation of this regulation. No person shall circumvent this regulation by using more openings than is considered normal practice by the industry or activity in question.

f. Compliance Certifications

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in the Colorado State Implementation Plan, nothing in the Colorado State Implementation Plan shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. Evidence that has the effect of making any relevant standard or permit term more stringent shall not be credible for proving a violation of the standard or permit term.

When compliance or non-compliance is demonstrated by a test or procedure provided by permit or other applicable requirement, the owner or operator shall be presumed to be in compliance or non-compliance unless other relevant credible evidence overcomes that presumption.

g. Affirmative Defense Provision for Excess Emissions During Startup and Shutdown

An affirmative defense is provided to owners and operators for civil penalty actions for excess emissions during periods of startup and shutdown. To establish the affirmative defense and to be relieved of a civil penalty in any action to enforce an applicable requirement, the owner or operator of the facility must meet the notification requirements below in a timely manner and prove by a preponderance of the evidence that:

(i) The periods of excess emissions that occurred during startup and shutdown were short and infrequent and could not have been prevented through careful planning and design;

(ii) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation or maintenance;

(iii) If the excess emissions were caused by a bypass (an intentional diversion of control equipment), then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(iv) The frequency and duration of operation in startup and shutdown periods were minimized to the maximum extent practicable;

(v) All possible steps were taken to minimize the impact of excess emissions on ambient air quality;

(vi) All emissions monitoring systems were kept in operation (if at all possible);

(vii) The owner or operator's actions during the period of excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence; and,

(viii) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions. This subparagraph is intended solely to be a factor in determining whether an affirmative defense is available to an owner or operator, and shall not constitute an additional applicable requirement.

The owner or operator of the facility experiencing excess emissions during startup and shutdown shall notify the Division verbally as soon as possible, but no later than two (2) hours after the start of the next working day, and shall submit written quarterly notification following the initial occurrence of the excess emissions. The notification shall address the criteria set forth above.

The Affirmative Defense Provision contained in this section shall not be available to claims for injunctive relief.

The Affirmative Defense Provision does not apply to State Implementation Plan provisions or other requirements that derive from new source performance standards or national emissions standards for hazardous air pollutants, or any other federally enforceable performance standard or emission limit with an averaging time greater than twenty-four hours. In addition, an affirmative defense cannot be used by a single source or small group of sources where the excess emissions have the potential to cause an exceedance of the ambient air quality standards or Prevention of Significant Deterioration (PSD) increments.

In making any determination whether a source established an affirmative defense, the Division shall consider the information within the notification required above and any other information the Division deems necessary, which may include, but is not limited to, physical inspection of the facility and review of documentation pertaining to the maintenance and operation of process and air pollution control equipment.

4. Compliance Requirements

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.C.9., V.C.11. & 16.d. and § 25-7-122.1(2), C.R.S.

a. The permittee must comply with all conditions of the Operating Permit. Any permit noncompliance relating to federally-enforceable terms or conditions constitutes a violation of the federal act, as well as the state act and Regulation No. 3. Any permit noncompliance relating to state-only terms or conditions constitutes a violation of the state act and Regulation No. 3, shall be enforceable pursuant to state law, and shall not be enforceable by citizens under § 304 of the federal act. Any such violation of the federal act, the state act or regulations implementing either statute is grounds for enforcement action, for permit termination, revocation and reissuance or modification or for denial of a permit renewal application.

b. It shall not be a defense for a permittee in an enforcement action or a consideration in favor of a permittee in a permit termination, revocation or modification action or action denying a permit renewal application that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

c. The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of any request by the permittee for a permit modification, revocation and reissuance, or termination, or any notification of planned changes or anticipated noncompliance does not stay any permit condition, except as provided in §§ X. and XI. of Regulation No. 3, Part C.

d. The permittee shall furnish to the Air Pollution Control Division, within a reasonable time as specified by the Division, any information that the Division may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Division copies of records required to be kept by the permittee, including information claimed to be confidential. Any information subject to a claim of confidentiality shall be specifically identified and submitted separately from information not subject to the claim.

e. Any schedule for compliance for applicable requirements with which the source is not in compliance at the time of permit issuance shall be supplemental, and shall not sanction noncompliance with, the applicable requirements on which it is based.

f. For any compliance schedule for applicable requirements with which the source is not in compliance at the time of permit issuance, the permittee shall submit, at least every 6 months unless a more frequent period is specified in the applicable requirement or by the Air Pollution Control Division, progress reports which contain the following:

   (i) dates for achieving the activities, milestones, or compliance required in the schedule for compliance, and dates when such activities, milestones, or compliance were achieved; and

   (ii) an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

g. The permittee shall not knowingly falsify, tamper with, or render inaccurate any monitoring device or method required to be maintained or followed under the terms and conditions of the Operating Permit.

5. Emergency Provisions

Regulation No. 3, 5 CCR 1001-5, Part C, § VII.E

An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed the technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. "Emergency" does not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error. An emergency constitutes an affirmative defense to an enforcement action brought for noncompliance with a technology-based emission limitation if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. an emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. the permitted facility was at the time being properly operated;

c. during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

d. the permittee submitted oral notice of the emergency to the Air Pollution Control Division no later than noon of the next working day following the emergency, and followed by written notice within one month of the time when emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

This emergency provision is in addition to any emergency or malfunction provision contained in any applicable requirement.

6. Emission Controls for Asbestos

Regulation No. 8, 5 CCR 1001-10, Part B

The permittee shall not conduct any asbestos abatement activities except in accordance with the provisions of Regulation No. 8, Part B, “asbestos control.”

7. Emissions Trading, Marketable Permits, Economic Incentives

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.13.

No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are specifically provided for in the permit.

8. Fee Payment

C.R.S §§ 25-7-114.1(6) and 25-7-114.7

a. The permittee shall pay an annual emissions fee in accordance with the provisions of C.R.S. § 25-7-114.7. A 1% per month late payment fee shall be assessed against any invoice amounts not paid in full on the 91st day after the date of invoice, unless a permittee has filed a timely protest to the invoice amount.

b. The permittee shall pay a permit processing fee in accordance with the provisions of C.R.S. § 25-7-114.7. If the Division estimates that processing of the permit will take more than 30 hours, it will notify the permittee of its estimate of what the actual charges may be prior to commencing any work exceeding the 30 hour limit.

c. The permittee shall pay an APEN fee in accordance with the provisions of C.R.S. § 25-7-114.1(6) for each APEN or revised APEN filed.

9. Fugitive Particulate Emissions

Regulation No. 1, 5 CCR 1001-3, § III.D.1.

The permittee shall employ such control measures and operating procedures as are necessary to minimize fugitive particulate emissions into the atmosphere, in accordance with the provisions of Regulation No. 1, § III.D.1.

10. Inspection and Entry

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.16.b.

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Air Pollution Control Division, or any authorized representative, to perform the following:

a. enter upon the permittee's premises where an Operating Permit source is located, or emissions-related activity is conducted, or where records must be kept under the terms of the permit;

b. have access to, and copy, at reasonable times, any records that must be kept under the conditions of the permit;

c. inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the Operating Permit;

d. sample or monitor at reasonable times, for the purposes of assuring compliance with the Operating Permit or applicable requirements, any substances or parameters.

11. Minor Permit Modifications

Regulation No. 3, 5 CCR 1001-5, Part C, §§ X. & XI.

The permittee shall submit an application for a minor permit modification before making the change requested in the application. The permit shield shall not extend to minor permit modifications.

12. New Source Review

Regulation No. 3, 5 CCR 1001-5, Part B

The permittee shall not commence construction or modification of a source required to be reviewed under the New Source Review provisions of Regulation No. 3, Part B, without first receiving a construction permit.

13. No Property Rights Conveyed

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.11.d.

This permit does not convey any property rights of any sort, or any exclusive privilege.

14. Odor

Regulation No. 2, 5 CCR 1001-4, Part A

As a matter of state law only, the permittee shall comply with the provisions of Regulation No. 2 concerning odorous emissions.

15. Off-Permit Changes to the Source

Regulation No. 3, 5 CCR 1001-5, Part C, § XII.B.

The permittee shall record any off-permit change to the source that causes the emissions of a regulated pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from the change, including any other data necessary to show compliance with applicable ambient air quality standards. The permittee shall provide

contemporaneous notification to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit. The permit shield shall not apply to any off-permit change.

16. Opacity

Regulation No. 1, 5 CCR 1001-3, §§ I., II.

The permittee shall comply with the opacity emissions limitation set forth in Regulation No. 1, §§ I.- II.

17. Open Burning

Regulation No. 9, 5 CCR 1001-11

The permittee shall obtain a permit from the Division for any regulated open burning activities in accordance with provisions of Regulation No. 9.

18. Ozone Depleting Compounds

Regulation No. 15, 5 CCR 1001-17

The permittee shall comply with the provisions of Regulation No. 15 concerning emissions of ozone depleting compounds. Sections I., II.C., II.D., III. IV., and V. of Regulation No. 15 shall be enforced as a matter of state law only.

19. Permit Expiration and Renewal

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.B.6., IV.C., V.C.2.

a. The permit term shall be five (5) years. The permit shall expire at the end of its term. Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted.

b. Applications for renewal shall be submitted at least twelve months, but not more than 18 months, prior to the expiration of the Operating Permit. An application for permit renewal may address only those portions of the permit that require revision, supplementing, or deletion, incorporating the remaining permit terms by reference from the previous permit. A copy of any materials incorporated by reference must be included with the application.

20. Portable Sources

Regulation No. 3, 5 CCR 1001-5, Part C, § II.D.

Portable Source permittees shall notify the Air Pollution Control Division at least 10 days in advance of each change in location.

21. Prompt Deviation Reporting

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.7.b.

The permittee shall promptly report any deviation from permit requirements, including those attributable to malfunction conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken.

"Prompt" is defined as follows:

a. Any definition of "prompt" or a specific timeframe for reporting deviations provided in an underlying applicable requirement as identified in this permit; or

b. Where the underlying applicable requirement fails to address the time frame for reporting deviations, reports of deviations will be submitted based on the following schedule:

(i) For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in the applicable regulation) that continue for more than an hour in excess of permit requirements, the report shall be made within 24 hours of the occurrence;

(ii) For emissions of any regulated air pollutant, excluding a hazardous air pollutant or a toxic air pollutant that continue for more than two hours in excess of permit requirements, the report shall be made within 48 hours; and

(iii) For all other deviations from permit requirements, the report shall be submitted every six (6) months, except as otherwise specified by the Division in the permit in accordance with paragraph 22.d. below.

c. If any of the conditions in paragraphs b.i or b.ii above are met, the source shall notify the Division by telephone (303-692-3155) or facsimile (303-782-0278) based on the timetables listed above. *[Explanatory note: Notification by telephone or facsimile must specify that this notification is a deviation report for an Operating Permit.]* A written notice, certified consistent with General Condition 2.a. above (Certification Requirements), shall be submitted within 10 working days of the occurrence. All deviations reported under this section shall also be identified in the 6-month report required above.

"Prompt reporting" does not constitute an exception to the requirements of "Emergency Provisions" for the purpose of avoiding enforcement actions.

22. Record Keeping and Reporting Requirements

Regulation No. 3, 5 CCR 1001-5, Part A, § II.; Part C, §§ V.C.6., V.C.7.

a. Unless otherwise provided in the source specific conditions of this Operating Permit, the permittee shall maintain compliance monitoring records that include the following information:

(i) date, place as defined in the Operating Permit, and time of sampling or measurements;

(ii) date(s) on which analyses were performed;

(iii) the company or entity that performed the analysis;

(iv) the analytical techniques or methods used;

(v) the results of such analysis; and

(vi) the operating conditions at the time of sampling or measurement.

b. The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report or application. Support information, for this purpose, includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the Operating Permit. With prior approval of the Air Pollution Control Division, the permittee may maintain any of the above records in a computerized form.

c. Permittees must retain records of all required monitoring data and support information for the most recent twelve (12) month period, as well as compliance certifications for the past five (5) years on-site at all times. A permittee shall make available for the Air Pollution Control Division's review all other records of required monitoring data and support information required to be retained by the permittee upon 48 hours advance notice by the Division.

d. The permittee shall submit to the Air Pollution Control Division all reports of any required monitoring at least every six (6) months, unless an applicable requirement, the compliance assurance monitoring rule, or the Division requires submission on a more frequent basis. All instances of deviations from any permit requirements must be clearly identified in such reports.

e. The permittee shall file an Air Pollutant Emissions Notice ("APEN") prior to constructing, modifying, or altering any facility, process, activity which constitutes a stationary source from which air pollutants are or are to be emitted, unless such source is exempt from the APEN filing requirements of Regulation No. 3, Part A, § II.D. A revised APEN shall be filed annually whenever a significant change in emissions, as defined in Regulation No. 3, Part A, § II.C.2., occurs; whenever there is a change in owner or operator of any facility, process, or activity; whenever new control equipment is installed; whenever a different type of control equipment replaces an existing type of control equipment; whenever a permit limitation must be modified; or before the APEN expires. An APEN is valid for a period of five years. The five-year period recommences when a revised APEN is received by the Air Pollution Control Division. Revised APENs shall be submitted no later than 30 days before the five-year term expires. Permittees submitting revised APENs to inform the Division of a change in actual emission rates must do so by April 30 of the following year. Where a permit revision is required, the revised APEN must be filed along with a request for permit revision. APENs for changes in control equipment must be submitted before the change occurs. Annual fees are based on the most recent APEN on file with the Division.

23. Reopenings for Cause

Regulation No. 3, 5 CCR 1001-5, Part C, § XIII.

a. The Air Pollution Control Division shall reopen, revise, and reissue Operating Permits; permit reopenings and reissuance shall be processed using the procedures set forth in Regulation No. 3, Part C, § III., except that proceedings to reopen and reissue permits affect only those parts of the permit for which cause to reopen exists.

b. The Division shall reopen a permit whenever additional applicable requirements become applicable to a major source with a remaining permit term of three or more years, unless the effective date of the requirements is later than the date on which the permit expires, or unless a general permit is obtained to address the new requirements; whenever additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program; whenever the Division determines the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or whenever the Division determines that the permit must be revised or revoked to assure compliance with an applicable requirement.

c. The Division shall provide 30 days' advance notice to the permittee of its intent to reopen the permit, except that a shorter notice may be provided in the case of an emergency.

d. The permit shield shall extend to those parts of the permit that have been changed pursuant to the reopening and reissuance procedure.

24. Section 502(b)(10) Changes

Regulation No. 3, 5 CCR 1001-5, Part C, § XII.A.

The permittee shall provide a minimum 7-day advance notification to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit. The permittee shall attach a copy of each such notice given to its Operating Permit.

25. Severability Clause

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.10.

In the event of a challenge to any portion of the permit, all emissions limits, specific and general conditions, monitoring, record keeping and reporting requirements of the permit, except those being challenged, remain valid and enforceable.

26. Significant Permit Modifications

Regulation No. 3, 5 CCR 1001-5, Part C, § III.B.2.

The permittee shall not make a significant modification required to be reviewed under Regulation No. 3, Part B ("Construction Permit" requirements) without first receiving a construction permit. The permittee shall submit a complete Operating Permit application or application for an Operating Permit revision for any new or modified source within twelve months of commencing operation, to the address listed in Item 1 in Appendix D of this permit. If the permittee chooses to use the "Combined Construction/Operating Permit" application procedures of Regulation No. 3, Part C, then the Operating Permit must be received prior to commencing construction of the new or modified source.

27. Special Provisions Concerning the Acid Rain Program

Regulation No. 3, 5 CCR 1001-5, Part C, §§ V.C.1.b. & 8

a. Where an applicable requirement of the federal act is more stringent than an applicable requirement of regulations promulgated under Title IV of the federal act, 40 Code of Federal Regulations (CFR) Part 72, both provisions shall be incorporated into the permit and shall be federally enforceable.

b. Emissions exceeding any allowances that the source lawfully holds under Title IV of the federal act or the regulations promulgated thereunder, 40 CFR Part 72, are expressly prohibited.

28. Transfer or Assignment of Ownership

Regulation No. 3, 5 CCR 1001-5, Part C, § II.C.

No transfer or assignment of ownership of the Operating Permit source will be effective unless the prospective owner or operator applies to the Air Pollution Control Division on Division-supplied Administrative Permit Amendment forms, for reissuance of the existing Operating Permit. No administrative permit shall be complete until a written agreement containing a specific date for transfer of permit, responsibility, coverage, and liability between the permittee and the prospective owner or operator has been submitted to the Division.

29. Volatile Organic Compounds

Regulation No. 7, 5 CCR 1001-9, §§ III & V.

The requirements in paragraphs a, b and e apply to sources located in an ozone non-attainment area or the Denver 1-hour ozone attainment/maintenance area. The requirements in paragraphs c and d apply statewide.

a. All storage tank gauging devices, anti-rotation devices, accesses, seals, hatches, roof drainage systems, support structures, and pressure relief valves shall be maintained and operated to prevent detectable vapor loss except when opened, actuated, or used for necessary and proper activities (e.g. maintenance). Such opening, actuation, or use shall be limited so as to minimize vapor loss.

   Detectable vapor loss shall be determined visually, by touch, by presence of odor, or using a portable hydrocarbon analyzer. When an analyzer is used, detectable vapor loss means a VOC concentration exceeding 10,000 ppm. Testing shall be conducted as in Regulation No. 7, Section VIII.C.3.

b. Except when otherwise provided by Regulation No. 7, all volatile organic compounds, excluding petroleum liquids, transferred to any tank, container, or vehicle compartment with a capacity exceeding 212 liters (56 gallons), shall be transferred using submerged or bottom filling equipment. For top loading, the fill tube shall reach within six inches of the bottom of the tank compartment. For bottom-fill operations, the inlet shall be flush with the tank bottom.

c. The permittee shall not dispose of volatile organic compounds by evaporation or spillage unless Reasonably Available Control Technology (RACT) is utilized.

d. No owner or operator of a bulk gasoline terminal, bulk gasoline plant, or gasoline dispensing facility as defined in Colorado Regulation No. 7, Section VI, shall permit gasoline to be intentionally spilled, discarded in sewers, stored in open containers, or disposed of in any other manner that would result in evaporation.

e. Beer production and associated beer container storage and transfer operations involving volatile organic compounds with a true vapor pressure of less than 1.5 PSIA actual conditions are exempt from the provisions of paragraph b, above.

30. Wood Stoves and Wood burning Appliances

Regulation No. 4, 5 CCR 1001-6

The permittee shall comply with the provisions of Regulation No. 4 concerning the advertisement, sale, installation, and use of wood stoves and wood burning appliances.

OPERATING PERMIT APPENDICES

A - INSPECTION INFORMATION
B - MONITORING AND PERMIT DEVIATION REPORT
C - COMPLIANCE CERTIFICATION REPORT
D - NOTIFICATION ADDRESSES
E - PERMIT ACRONYMS
F - NSPS KKK EXAMPLE REPORT FORMAT
G - PERMIT MODIFICATIONS
H - ENGINE AOS APPLICABILITY REPORTS
I - COMPLIANCE ASSURANCE MONITORING

*DISCLAIMER:

None of the information found in these Appendices shall be considered to be State or Federally enforceable, except as otherwise stated in this permit, and is presented to assist the source, permitting authority, inspectors, and citizens.

APPENDIX A - Inspection Information

1. Directions to Plant:

The facility is located in Section 34, T2N, R67W, which is a ¼ mile north of State Highway 52, 3½ miles west of Fort Lupton, Colorado. From I-25 North take Exit 235 (CR 52) and go east on 52 ~5 miles. Turn left at CR 19 and Spindle is ~1/2 mile on the right.

2. Safety Equipment Required:

Hard Hat, Safety Shoes, Ear Protection, Eye Protection, and Fire Retardant Clothing.

3. Facility Plot Plan:

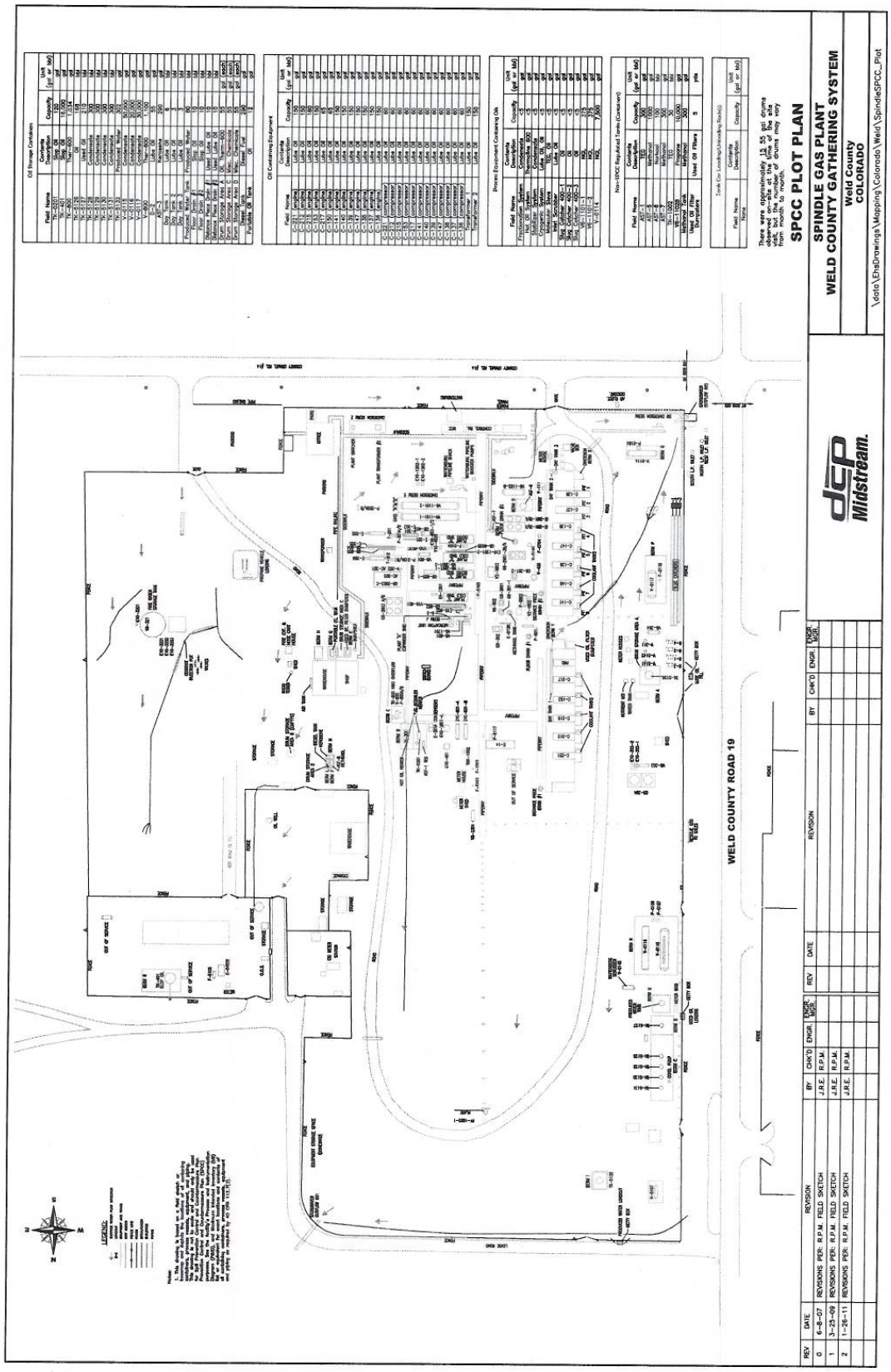
Figure 1 shows the plot plan as submitted on September 28, 2011.

4. List of Insignificant Activities:

The following generic list of insignificant activities was provided in the Title V application:

2.2 MMBtu/hr, Heater S-175
1.75 MMBtu/hr, Reboiler S-178
2 MMBtu/hr, Heater S-179
1.97 MMBtu/hr, Regen Heater S-174
1.5 MMBtu/hr, Regen Heater S-172
Two (2) 1.6 MMBtu/hr, Heaters, S-173 & S-176
Twelve (12) Compressor Blowdown Vents
East Condensate Loading and Unloading
West Propane Loading Rack
East BG Loading Rack
West Y-Grade Loading and Unloading
Emergency Flare
500 gal, Kerosene tank
210-bbl, Lube Oil tank
6,000 gal, Lube Oil tank
Two (2) 500 gal, Lube Oil tanks
470 gal, Lube Oil tank
300 gal, Lube Oil
4,512 gal, Used Oil tank
500 gal, portable Used Oil Tank
Three (3) 225 gal, Used Oil Tanks
500 gal, Diesel tank
500 gal, Dyed Diesel tank
30 bbl, Slop Oil Tank
Two (2) 80 bbl, Slop Oil Tanks
210 bbl, Slop Oil Tank

Two (2) 10 bbl, Slop Oil Tanks
220 gal, Slop Oil tank
Four (4) 30,000 gal Pressurized NGL Storage Tanks
Four (4) 80 bbl, Produced Water Tanks
80 bbl, Stormwater Tank
80 bbl, Wastewater Tank
10 bbl, Dehy water tank
1,000 gal, Methanol tank
Four (4) 500 gal, Methanol tanks
Two (2) 1,000 gal, Norkool tanks
Two (2) 24 bbl, Norkool tanks
500 gal, TEG tank
Two (2) 80,000 gal Pressurized Butane Storage Tanks
30,000 gal Pressurized Propane Storage Tank
18,000 gal Pressurized Methanol Storage Tank


SPCC PLOT PLAN
SPINDLE GAS PLANT
WELD COUNTY GATHERING SYSTEM
Weld County
COLORADO
WELD COUNTY ROAD 19
dcp Midstream

APPENDIX B
Reporting Requirements and Definitions
with codes ver 2/20/07

Please note that, pursuant to 113(c)(2) of the federal Clean Air Act, any person who knowingly:

(A) makes any false material statement, representation, or certification in, or omits material information from, or knowingly alters, conceals, or fails to file or maintain any notice, application, record, report, plan, or other document required pursuant to the Act to be either filed or maintained (whether with respect to the requirements imposed by the Administrator or by a State);

(B) fails to notify or report as required under the Act; or

(C) falsifies, tampers with, renders inaccurate, or fails to install any monitoring device or method required to be maintained or followed under the Act shall, upon conviction, be punished by a fine pursuant to title 18 of the United States Code, or by imprisonment for not more than 2 years, or both. If a conviction of any person under this paragraph is for a violation committed after a first conviction of such person under this paragraph, the maximum punishment shall be doubled with respect to both the fine and imprisonment.

The permittee must comply with all conditions of this operating permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

The Part 70 Operating Permit program requires three types of reports to be filed for all permits.

All required reports must be certified by a responsible official.

Report #1: Monitoring Deviation Report (due at least every six months)

For purposes of this operating permit, the Division is requiring that the monitoring reports are due every six months unless otherwise noted in the permit. All instances of deviations from permit monitoring requirements must be clearly identified in such reports.

For purposes of this operating permit, monitoring means any condition determined by observation, by data from any monitoring protocol, or by any other monitoring which is required by the permit as well as the recordkeeping associated with that monitoring. This would include, for example, fuel use or process rate monitoring, fuel analyses, and operational or control device parameter monitoring.

Report #2: Permit Deviation Report (must be reported "promptly")

In addition to the monitoring requirements set forth in the permits as discussed above, each and every requirement of the permit is subject to deviation reporting. The reports must address deviations from permit requirements, including those attributable to malfunctions as defined in this Appendix, the probable cause of such deviations, and any corrective actions or preventive measures taken. All deviations from any term or condition of the permit are required to be summarized or referenced in the annual compliance certification.

For purposes of this operating permit, "malfunction" shall refer to both emergency conditions and malfunctions. Additional discussion on these conditions is provided later in this Appendix.

For purposes of this operating permit, the Division is requiring that the permit deviation reports are due as set forth in General Condition 21. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. For example, quarterly Excess Emission Reports required by an NSPS or Regulation No. 1, Section IV.

In addition to the monitoring deviations discussed above, included in the meaning of deviation for the purposes of this operating permit are any of the following:

(1) A situation where emissions exceed an emission limitation or standard contained in the permit;

(2) A situation where process or control device parameter values demonstrate that an emission limitation or standard contained in the permit has not been met;

(3) A situation in which observations or data collected demonstrates noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit; or,

(4) A situation in which an excursion or exceedance as defined in 40CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. (only if the emission point is subject to CAM)

For reporting purposes, the Division has combined the Monitoring Deviation Report with the Permit Deviation Report. All deviations shall be reported using the following codes:

1 = Standard:	When the requirement is an emission limit or standard
2 = Process:	When the requirement is a production/process limit
3 = Monitor:	When the requirement is monitoring
4 = Test:	When the requirement is testing
5 = Maintenance:	When required maintenance is not performed
6 = Record:	When the requirement is recordkeeping
7 = Report:	When the requirement is reporting
8 = CAM:	A situation in which an excursion or exceedance as defined in 40CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred.
9 = Other:	When the deviation is not covered by any of the above categories

Report #3: Compliance Certification (annually, as defined in the permit)

Submission of compliance certifications with terms and conditions in the permit, including emission limitations, standards, or work practices, is required not less than annually.

Compliance Certifications are intended to state the compliance status of each requirement of the permit over the certification period. They must be based, at a minimum, on the testing and monitoring methods specified in the permit that were conducted during the relevant time period. In addition, if the owner or operator knows of other material information (i.e. information beyond required monitoring that has been specifically assessed in relation

to how the information potentially affects compliance status), that information must be identified and addressed in the compliance certification. The compliance certification must include the following:

- The identification of each term or condition of the permit that is the basis of the certification;

- Whether or not the method(s) used by the owner or operator for determining the compliance status with each permit term and condition during the certification period was the method(s) specified in the permit. Such methods and other means shall include, at a minimum, the methods and means required in the permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Clean Air Act, which prohibits knowingly making a false certification or omitting material information;

- The status of compliance with the terms and conditions of the permit, and whether compliance was continuous or intermittent. The certification shall identify each deviation and take it into account in the compliance certification. Note that not all deviations are considered violations.[1]

- Such other facts as the Division may require, consistent with the applicable requirements to which the source is subject, to determine the compliance status of the source.

The Certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. (only for emission points subject to CAM)

Note the requirement that the certification shall identify each deviation and take it into account in the compliance certification. Previously submitted deviation reports, including the deviation report submitted at the time of the annual certification, may be referenced in the compliance certification.

[1] For example, given the various emissions limitations and monitoring requirements to which a source may be subject, a deviation from one requirement may not be a deviation under another requirement which recognizes an exception and/or special circumstances relating to that same event.

Startup, Shutdown, Malfunctions and Emergencies

Understanding the application of Startup, Shutdown, Malfunctions and Emergency Provisions, is very important in both the deviation reports and the annual compliance certifications.

Startup, Shutdown, and Malfunctions

Please note that exceedances of some New Source Performance Standards (NSPS) and Maximum Achievable Control Technology (MACT) standards that occur during Startup, Shutdown or Malfunctions may not be considered to be non-compliance since emission limits or standards often do not apply unless specifically stated in the NSPS. Such exceedances must, however, be reported as excess emissions per the NSPS/MACT rules and would still be noted in the deviation report. In regard to compliance certifications, the permittee should be confident of the information related to those deviations when making compliance determinations since they are subject to Division review. The concepts of Startup, Shutdown and Malfunctions also exist for Best Available Control Technology (BACT) sources, but are not applied in the same fashion as for NSPS and MACT sources.

Emergency Provisions

Under the Emergency provisions of Part 70 certain operational conditions may act as an affirmative defense against enforcement action if they are properly reported.

DEFINITIONS

Malfunction (NSPS) means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Malfunction (SIP) means any sudden and unavoidable failure of air pollution control equipment or process equipment or unintended failure of a process to operate in a normal or usual manner. Failures that are primarily caused by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

Emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

Monitoring and Permit Deviation Report - Part I

1. Following is the **required** format for the Monitoring and Permit Deviation report to be submitted to the Division as set forth in General Condition 21. The Table below must be completed for all equipment or processes for which specific Operating Permit terms exist.

2. Part II of this Appendix B shows the format and information the Division will require for describing periods of monitoring and permit deviations, or malfunction or emergency conditions as indicated in the Table below. One Part II Form must be completed for each Deviation. Previously submitted reports (e.g. EER's or malfunctions) may be referenced and the form need not be filled out in its entirety.

FACILITY NAME: DCP Midstream, LP – Spindle Gas Plant
OPERATING PERMIT NO: 95OPWE039
REPORTING PERIOD:_____ (see first page of the permit for specific reporting period and dates)

Unit ID	Unit Description	Deviations noted During Period?[1]		Deviation Code[2]	Malfunction/Emergency Condition Reported During Period?	
		YES	NO		YES	NO
P160 C136	Waukesha Model L-7042 GSI NG Compressor Engine, 1232 HP					
P161 C137	Waukesha Model L-7042 GSI NG Compressor Engine, 1232 HP					
P162 C138	Waukesha Model L-7042 GSI NG Compressor Engine, 1232 HP					
P163 C147	Waukesha Model L-7042 GSI NG Compressor Engine, 1232 HP					
P164 C139	Waukesha Model L-7042 GSI NG Compressor Engine, 1000 HP					
P165 C140	Waukesha Model L-7042 GSI NG Compressor Engine, 1000 HP					
P166 C141	Waukesha Model L-7042 GSI NG Compressor Engine, 1232 HP					
P168 C217	Caterpillar Model G-342 Residue Gas Compressor Engine, 230 HP					
P169 C153	Waukesha Model L-7042 GU NG Compressor Engine, 1000 HP					
P170 C215	Superior Ajax 8SGTB Residue Gas Compressor Engine, 1215 HP					
P171 C212	Superior Model 6G825 Residue Gas Compressor Engine, 600 HP					
P178	Natural Gas Dehydration System; using triethylene glycol					

Unit ID	Unit Description	Deviations noted During Period?[1]		Deviation Code[2]	Malfunction/Emergency Condition Reported During Period?	
		YES	NO		YES	NO
P179	Natural Gas Fired Heater for heating hot oil; Serial No. J87426					
P181	Gas Plant Fugitive Emission					
P182	Condensate Truck Load-out					
P183	Condensate Storage Tanks					
CIG-S-2 C-221	Superior Model 6G825 NG Compressor Engine, 474 HP					
	General Conditions					
	Insignificant Activities					

[1] See previous discussion regarding what is considered to be a deviation. Determination of whether or not a deviation has occurred shall be based on a reasonable inquiry using readily available information.

[2] Use the following entries, as appropriate

1 = Standard: When the requirement is an emission limit or standard
2 = Process: When the requirement is a production/process limit
3 = Monitor: When the requirement is monitoring
4 = Test: When the requirement is testing
5 = Maintenance: When required maintenance is not performed
6 = Record: When the requirement is recordkeeping
7 = Report: When the requirement is reporting
8 = CAM: A situation in which an excursion or exceedance as defined in 40CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred.
9 = Other: When the deviation is not covered by any of the above categories

Monitoring and Permit Deviation Report - Part II

FACILITY NAME: DCP Midstream, LP – Spindle Gas Plant
OPERATING PERMIT NO: 95OPWE039
REPORTING PERIOD:

Is the deviation being claimed as an: Emergency _____ Malfunction_____ N/A _____

(For NSPS/MACT) Did the deviation occur during: Startup _____ Shutdown _____ Malfunction _____

Normal Operation _____

OPERATING PERMIT UNIT IDENTIFICATION:

Operating Permit Condition Number Citation

Explanation of Period of Deviation

Duration (start/stop date & time)

Action Taken to Correct the Problem

Measures Taken to Prevent a Reoccurrence of the Problem

Dates of Malfunctions/Emergencies Reported (if applicable)

Deviation Code _____ Division Code QA: _____

SEE EXAMPLE ON THE NEXT PAGE

EXAMPLE

FACILITY NAME: Acme Corp.
OPERATING PERMIT NO: 96OPZZXXX
REPORTING PERIOD: 1/1/04 - 6/30/06

Is the deviation being claimed as an: Emergency _____ Malfunction __XX____ N/A

(For NSPS/MACT) Did the deviation occur during: Startup _____ Shutdown _____ Malfunction
Normal Operation _____

OPERATING PERMIT UNIT IDENTIFICATION:

Asphalt Plant with a Scrubber for Particulate Control - Unit XXX

Operating Permit Condition Number Citation

Section II, Condition 3.1 - Opacity Limitation

Explanation of Period of Deviation

Slurry Line Feed Plugged

Duration

START- 1730 4/10/06
END- 1800 4/10/06

Action Taken to Correct the Problem

Line Blown Out

Measures Taken to Prevent Reoccurrence of the Problem

Replaced Line Filter

Dates of Malfunction/Emergencies Reported (if applicable)

5/30/06 to J. Garcia, APCD

Deviation Code _____ Division Code QA: _____

Monitoring and Permit Deviation Report - Part III

REPORT CERTIFICATION

SOURCE NAME: DCP Midstream, LP – Spindle Gas Plant

FACILITY IDENTIFICATION NUMBER: 123/0015

PERMIT NUMBER: 95OPWE039

REPORTING PERIOD:_____ (see first page of the permit for specific reporting period and dates)

All information for the Title V Semi-Annual Deviation Reports must be certified by a responsible official as defined in Colorado Regulation No. 3, Part A, Section I.B.38. This signed certification document must be packaged with the documents being submitted.

STATEMENT OF COMPLETENESS

I have reviewed the information being submitted in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this submittal are true, accurate and complete.

Please note that the Colorado Statutes state that any person who knowingly, as defined in Sub-Section 18-1-501(6), C.R.S., makes any false material statement, representation, or certification in this document is guilty of a misdemeanor and may be punished in accordance with the provisions of Sub-Section 25-7 122.1, C.R.S.

Printed or Typed Name Title

Signature of Responsible Official Date Signed

Note: Deviation reports shall be submitted to the Division at the address given in Appendix D of this permit. No copies need be sent to the U.S. EPA.

APPENDIX C

Required Format for Annual Compliance Certification Reports

Following is the format for the Compliance Certification report to be submitted to the Division and the U.S. EPA annually based on the effective date of the permit. The Table below must be completed for all equipment or processes for which specific Operating Permit terms exist.

FACILITY NAME: DCP Midstream, LP – Spindle Gas Plant
OPERATING PERMIT NO: 95OPWE039
REPORTING PERIOD:

I. Facility Status

___ During the entire reporting period, this source was in compliance with **ALL** terms and conditions contained in the Permit, each term and condition of which is identified and included by this reference. The method(s) used to determine compliance is/are the method(s) specified in the Permit.

___ With the possible exception of the deviations identified in the table below, this source was in compliance with all terms and conditions contained in the Permit, each term and condition of which is identified and included by this reference, during the entire reporting period. The method used to determine compliance for each term and condition is the method specified in the Permit, unless otherwise indicated and described in the deviation report(s). Note that not all deviations are considered violations.

Unit ID	Unit Description	Deviations Reported[1]		Monitoring Method per Permit?[2]		Was compliance continuous or intermittent?[3]	
		Previous	Current	YES	NO	Continuous	Intermittent
P160 C136	Waukesha L-7042 GSI NG Compressor Engine, 1232 HP						
P161 C137	Waukesha L-7042 GSI NG Compressor Engine, 1232 HP						
P162 C138	Waukesha L-7042 GSI NG Compressor Engine, 1232 HP						
P163 C147	Waukesha L-7042 GSI NG Compressor Engine, 1232 HP						
P164 C139	Waukesha L-7042 GSI NG Compressor Engine, 1000 HP						
P165 C140	Waukesha L-7042 GSI NG Compressor Engine, 1000 HP						
P166 C141	Waukesha L-7042 GSI NG Compressor Engine, 1232 HP						
P168 C217	Caterpillar G-342 Residue Gas Compressor Engine, 230 HP						
P169 C153	Waukesha L-7042 GU NG Compressor Engine, 1000 HP						

Unit ID	Unit Description	Deviations Reported[1]		Monitoring Method per Permit?[2]		Was compliance continuous or intermittent?[3]	
		Previous	Current	YES	NO	Continuous	Intermittent
P170 C215	Superior Ajax 8SGTB Residue Gas Compressor Engine, 1215 HP						
P171 C212	Superior 6G825 Residue Gas Compressor Engine, 600 HP						
P178	Natural Gas Dehydration System; using triethylene glycol						
P179	Natural Gas Fired Heater for heating hot oil						
P181	Gas Plant Fugitive Emissions						
P182	Condensate Truck Load-out						
P183	Condensate Storage Tank						
CIG-S-2 C-221	Superior 6G825 NG Compressor Engine, 474 HP						
	General Conditions						
	Insignificant Activities						

[1] If deviations were noted in a previous deviation report , put an "X" under "previous". If deviations were noted in the current deviation report (i.e. for the last six months of the annual reporting period), put an "X" under "current". Mark both columns if both apply.

[2] Note whether the method(s) used to determine the compliance status with each term and condition was the method(s) specified in the permit. If it was not, mark "no" and attach additional information/explanation.

[3] Note whether the compliance status with each term and condition provided was continuous or intermittent. "Intermittent Compliance" can mean either that noncompliance has occurred or that the owner or operator has data sufficient to certify compliance only on an intermittent basis. Certification of intermittent compliance therefore does not necessarily mean that any noncompliance has occurred.

NOTE:

The Periodic Monitoring requirements of the Operating Permit program rule are intended to provide assurance that even in the absence of a continuous system of monitoring the Title V source can demonstrate whether it has operated in continuous compliance for the duration of the reporting period. Therefore, if a source 1) conducts all of the monitoring and recordkeeping required in its permit, even if such activities are done periodically and not continuously, and if 2) such monitoring and recordkeeping does not indicate non-compliance, and if 3) the Responsible Official is not aware of any credible evidence that indicates non-compliance, then the Responsible Official can certify that the emission point(s) in question were in continuous compliance during the applicable time period.

[4] Compliance status for these sources shall be based on a reasonable inquiry using readily available information.

II. Status for Accidental Release Prevention Program:

A. This facility _____ is subject _____ is not subject to the provisions of the Accidental Release Prevention Program (Section 112(r) of the Federal Clean Air Act)

B. If subject: The facility _____ is _____ is not in compliance with all the requirements of section 112(r).

1. A Risk Management Plan _____ will be _____ has been submitted to the appropriate authority and/or the designated central location by the required date.

III. Certification

All information for the Annual Compliance Certification must be certified by a responsible official as defined in Colorado Regulation No. 3, Part A, Section I.B.38. This signed certification document must be packaged with the documents being submitted.

I have reviewed this certification in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this certification are true, accurate and complete.

Please note that the Colorado Statutes state that any person who knowingly, as defined in § 18-1-501(6), C.R.S., makes any false material statement, representation, or certification in this document is guilty of a misdemeanor and may be punished in accordance with the provisions of § 25-7 122.1, C.R.S.

Printed or Typed Name Title

Signature Date Signed

NOTE: All compliance certifications shall be submitted to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit.

APPENDIX D
Notification Addresses

1. Air Pollution Control Division

Colorado Department of Public Health and Environment
Air Pollution Control Division
Operating Permits Unit
APCD-SS-B1
4300 Cherry Creek Drive S.
Denver, CO 80246-1530

ATTN: Matt Burgett

2. United States Environmental Protection Agency

Compliance Notifications:

Office of Enforcement, Compliance and Environmental Justice
Mail Code 8ENF-T
U.S. Environmental Protection Agency, Region VIII
1595 Wynkoop Street
Denver, CO 80202-1129

Permit Modifications, Off Permit Changes:

Office of Partnerships and Regulatory Assistance
Air and Radiation Programs, 8P-AR
U.S. Environmental Protection Agency, Region VIII
1595 Wynkoop Street
Denver, CO 80202-1129

APPENDIX E
Permit Acronyms

Listed Alphabetically:

AIRS -	Aerometric Information Retrieval System
AP-42 -	EPA Document Compiling Air Pollutant Emission Factors
APEN -	Air Pollution Emission Notice (State of Colorado)
APCD -	Air Pollution Control Division (State of Colorado)
ASTM -	American Society for Testing and Materials
BACT -	Best Available Control Technology
BTU -	British Thermal Unit
CAA -	Clean Air Act (CAAA = Clean Air Act Amendments)
CCR -	Colorado Code of Regulations
CEM -	Continuous Emissions Monitor
CF -	Cubic Feet (SCF = Standard Cubic Feet)
CFR -	Code of Federal Regulations
CO -	Carbon Monoxide
COM -	Continuous Opacity Monitor
CRS -	Colorado Revised Statute
EF -	Emission Factor
EPA -	Environmental Protection Agency
FI -	Fuel Input Rate (MMBtu/hr)
FR -	Federal Register
G -	Grams
Gal -	Gallon
GPM -	Gallons per Minute
HAPs -	Hazardous Air Pollutants
HP -	Horsepower
HP-HR -	Horsepower Hour (G/HP-HR = Grams per Horsepower Hour)
LAER -	Lowest Achievable Emission Rate
LBS -	Pounds
M -	Thousand
MM -	Million
MMscf -	Million Standard Cubic Feet
MMscfd -	Million Standard Cubic Feet per Day
N/A or NA -	Not Applicable
NOx -	Nitrogen Oxides
NESHAP -	National Emission Standards for Hazardous Air Pollutants
NSPS -	New Source Performance Standards
P -	Process Weight Rate in Tons/Hr
PE -	Particulate Emissions
PM -	Particulate Matter
PM_{10} -	Particulate Matter Under 10 Microns
PSD -	Prevention of Significant Deterioration

PTE -	Potential To Emit
RACT -	Reasonably Available Control Technology
SCC -	Source Classification Code
SCF -	Standard Cubic Feet
SIC -	Standard Industrial Classification
SO_2 -	Sulfur Dioxide
TPY -	Tons Per Year
TSP -	Total Suspended Particulate
VOC -	Volatile Organic Compounds

APPENDIX F
NSPS KKK Example Report Format

DISCLAIMER: This is only an example report and does not cover all possible KKK requirements.

NSPS SUBPART KKK
STANDARDS OF PERFORMANCE FOR EQUIPMENT
LEAKS OF VOC FROM ONSHORE NATURAL GAS
PROCESSING PLANTS

Acme Gas Processing
FID: 9991234
Permit #: 93OPXX999
September 1, 1996

Determination of reporting requirements for 93OPXX999 under Subpart KKK Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants. **Note that any non-applicability determinations under the provisions of 60.630 must be accompanied by a detailed explanation including copies of any relevant test results or any other supporting documentation.**

Determination of NSPS KKK requirements:

60.630

(a) (1) Applies to Acme plant since it is an onshore natural gas processing plant.

(2) Applies to Acme plant since compressors are in VOC service and wet gas service.

(3) Applies to Acme Plant since the group of equipment, excluding compressors, is in wet gas service.

(b) Applies to Acme since the plant was placed into operation after January 20, 1984.

(e) Applies to the compressor station and glycol dehydration units since they are located at the plant.

60.632

(a) Subject to the provisions of this subpart and shall comply as soon as practical, but no later than 180 days after initial startup.

60.482-1 Subject to parts (a) and (b) requiring that compliance be demonstrated within 180 days of equipment initial startup. This compliance shall be determined by a review of records and reports, performance test results, and inspection

methods and procedures of 60.485. Part (d) applies but ACME has no equipment in vacuum service.

60.482-2 Exempt under 60.633 (d).

60.482-3 Exempt under 60.633(f).

60.482-4 Applies but superseded by 60.633 (b).

60.482-5 Exempt under 60.633(c).

60.482-6 Does Not Apply. ACME does not have any open-ended lines.

60.582-7 Applies to this facility. Valves shall be monitored monthly by methods in 485(b)-(e). An instrument reading of 10,000 ppm or greater indicates a leak. Any valve for which a leak hasn't been detected for 2 successive months will be monitored the first month of every quarter until a leak is detected. After detection of a leak, the valve shall be monitored monthly until a leak is not detected for 2 successive months. When a leak is detected, it shall be repaired as soon as practical but no later than 15 calendar days after detection. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

60.482-8 Does Not Apply. ACME has no equipment in heavy liquid service or pressure relief devices in light liquid service.

60.482-9 Applies to this facility. Delays of equipment repair allowed as specified under this subpart.

60.482-10 Does Not Apply. ACME has no closed vent systems or control devices.

60.483 Alternative Standards

Acme has elected not to use the provisions of 60.483-1 which allows alternative standards for valves by complying with an allowable percentage of leaking valves of equal to or less than 2.0 percent.

Acme has elected not to use the provisions of 60.483-2 which allows alternative standards for valves by skipping period(s) of leak detection and repair.

60.633 Exceptions

(b) (1) Each pressure relief device shall be monitored quarterly and within 5 days after each pressure relief to detect leaks as per 60.485(b).

(2) An instrument reading of 10,000 ppm or greater is a leak.

(3) (i) When a leak is detected, it shall be repaired as soon as practical, but no later than 15 calendar days after detection.

(ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(4) Does Not Apply. Facility is staffed full-time.

(c) Applies to this facility. As previously stated, ACME is exempt from the requirements of 60.482-5.

(d) Applies, ACME has a design capacity to process 5 million standard cubic feet per day of field gas (less than the 10 mmscf/day limit). As such, ACME is exempt from the routine monitoring requirements of 60.482-2(a)(1) and 60.482-7(a), and paragraph (b)(1) of this section.

(e) Does Not Apply. Facility not in the Alaskan North Slope.

(f) Applies to this facility. All compressors are in wet gas service and are therefore exempt from the requirements of 60.482-3.

(g) Does Not Apply. ACME has no flaring equipment.

(h) Does Not Apply. ACME has no equipment in heavy liquid service.

60.634 Alternative Means of Emission Limitation

Acme has not elected to use the provisions of 60.634 which allows an alternative means of emission limitation if approved by the Administrator and published in the Federal Register.

60.635 Record keeping requirements

(a) Applies to this facility. Subject to the requirements of 60.486.

60.486 Record keeping requirements

60.482-7 - When each leak is detected as specified this provisions, the requirements of 60.486(b) and 60.486(c) apply.

60.482-1 to 60.482-10 - All equipment subject to these provisions are subject to the provisions of 60.486(e).

60.482-7(g), (h)- All valves subject to these provisions are subject to the requirements of 60.486(f).

60.486(j)- Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.

60.635(b)(1) When a leak has been detected a weatherproof marker shall be placed on the pressure relief device.

(b)(2) When each leak is detected, the following information shall be kept for at least 2 years in the operational log

(i) the identification number of the instrument used to identify the leak the operator identification number and the identification number of the equipment responsible for the leak.

(ii) the date the leak was detected and the dates of repair

(iii) the repair methods used to repair the leak

(iv) if the leak was above 10,000 ppm

(v) if the repair was delayed and how many days

(vi) signature of the owner or operator identifying and repairing the leak

(vii) was the leak repaired in less than 15 days after the discovery of the leak and if it was not the reason for the delay.

(viii) the dates of process unit shutdown that occurred to repair the leak

(ix) the date of successful repair of the leak

(x) the list of equipment identification numbers for no detectable emissions

60.636 Reporting requirements

(a) Applies to this facility. Subject to the reporting requirements of 60.487.

(b) Operator shall include the following information on a semi annual report:

(1)-(4) Number of pressure relief devices subject to the requirements of 60.636(b)

(e) (1) Number of pressure relief devices for which leaks were detected

(c) (2) Number of pressure relief devices for which leaks were not repaired

60.487 Reporting requirements

(a) Each owner or operator subject to the provisions of Subpart VV shall submit semiannual reports beginning 6 months after the initial startup date.

(b) The initial report to the administrator shall include the process unit identification and the number of equipment subject to 60.482-7, 60.482-2, 60.482-3.

(c) All semiannual reports shall include the following information:

(1) Process unit identification

(2) For each month:

(i) Number of valves for which leaks were detected under 60.482-7.

(ii) Number of valves for which leaks were not repaired as required under 60.482-7.

(iii-vi) Exempt under various provisions above

(vii) The facts that explain each delay and repair and, where appropriate, why a process unit shutdown was technically infeasible.

(3) Dates of process unit shutdowns within the semiannual reporting period.

(4) Any new items not included in the initial list of subject equipment.

(d) If electing to comply with alternative monitoring, the administrator shall be notified of the standard selected 90 days prior to implementation.

(e) All performance tests shall be reported. The administrator shall be notified of any initial performance tests 30 days prior to testing.

CONCLUSION OF FINDINGS

In general, ACME is subject to the general monitoring for valves in gas/vapor service and pressure relief devices. Valves will be monitored monthly for leaks (readings above 10,000 ppm) except that 2 successive months without leaks shall allow the monitoring to be quarterly. Pressure relief devices will be monitored quarterly for leaks (readings above 10,000 ppm) and within 5 days after each pressure release. All leaking equipment will be marked with a weatherproof tag. All leaks will be repaired no later than 15 days after detection. A first attempt at repair shall be made no later than 5 calendar days after leak detection. Any changes in equipment which triggers additional requirements will be reported no later than the semi-annual report. Records shall be maintained on site with the information as described under 60.635 and 60.486, above. Reports shall contain the information described under 60.636 and 60.487, above.

Therefore the following forms shall be submitted on a semi annual basis beginning September 1, 1997 for compliance under NSPS KKK. The form shall also report an estimated volume of VOC emissions which were associated with the leak, or failure of any pressure relief device reported on the log books, or in the reporting

form as attached. Acme does keep records of the testing and replacement of all pressure relief valves and a copy of these records is attached for review.

APPENDIX G
Permit Modifications

DATE OF REVISION	SECTION NUMBER, CONDITION NUMBER	DESCRIPTION OF REVISION

APPENDIX H
Engine AOS Applicability Reports

ver 12/10/08

Note: A MS Word version of this Appendix can be found at:

http://www.cdphe.state.co.us/ap/oilgaspermitting.html

DISCLAIMER:

These are only example reports and do not cover all possible requirements.

Engine AOS Applicability Report Certification Language

All information for the Applicability Reports must be certified by either 1) for Operating Permits, a Responsible Official as defined in Colorado Regulation No. 3, Part A, Section I.B.38. or 2) for Construction and General Permits, the person legally authorized to act on behalf of the source. This signed certification document must be packaged with the documents being submitted.

I have reviewed this certification in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this certification are true, accurate and complete. Further, I agree that by signing and submitting these documents I agree that any new requirements identified in the Applicability Report(s) shall be considered to be Applicable Requirements as defined in Colorado Regulation No. 3, section I.B.9., and that such requirements shall be enforceable by the Division and its agents and shall be considered to be revisions to the underlying permit(s) referenced in the Report(s) until such time as the Permit is revised to reflect the new requirements.

Please note that the Colorado Statutes state that any person who knowingly, as defined in § 18-1-501(6), C.R.S., makes any false material statement, representation, or certification in this document is guilty of a misdemeanor and may be punished in accordance with the provisions of § 25-7 122.1, C.R.S.

Printed or Typed Name

Title

Signature Date Signed

Colorado Regulation No. 7
Sections XVI and XVII.E

DISCLAIMER: This is only an example report and does not cover all possible Reg 7 requirements.

Company: Acme Gas Processing
Source ID: 999/1234/001
Permit #: 93OPXX999
Date: October 1, 2008

Determination of compliance and reporting requirements for a

Manufacturer: BestEngineCompany
Model: 777 LowNox
Nameplate HP: 1340
Construction date: July 1, 2007

Note: If the engine is exempt from a requirement due to construction date or was relocated from within Colorado, supporting documentation must be provided.

Determination of Regulation No. 7 requirements:

Regulation No. 7, § XVI

☐ Does not apply to this engine. Engine is not located in the ozone nonattainment area or does not have a manufacturer's design rate greater than 500 horsepower or did not commence operation on or after June 1, 2004.

☐ Does apply to this engine and applicable emissions controls have been installed.

Regulation No. 7, § XVII.E

☐ Does not apply to this engine. Engine does not have a maximum horsepower greater than 100 or the construction or relocation date precedes the applicability dates.

☐ Does apply to this engine. The following emission limits apply to the engine:

NO_X (g/hp-hr): 2.0
CO (g/hp-hr): 4.0
VOC (g/hp-hr): 1.0

Max Engine HP	Construction or Relocation Date	Emission Standards in g/hp-hr		
		NO_X	CO	VOC
100<Hp<500	January 1, 2008	2.0	4.0	1.0
	January 1, 2011	1.0	2.0	0.7
500≤Hp	July 1, 2007	2.0	4.0	1.0
	July 1, 2010	1.0	2.0	0.7

NSPS JJJJ Example Report Format

DISCLAIMER: This is only an example report and does not cover all possible JJJJ requirements.

Note that as of September 1, 2008 that the Division has not yet adopted NSPS JJJJ. Until such time as it does, any engine subject to NSPS will be subject only under Federal law. Once the Division adopts NSPS JJJJ, there will be an additional step added to the determination of the NSPS. Under the provisions of Regulation No. 6, Part B, § I.B (which is referenced in Part A), any engine relocated from outside of the State of Colorado into the State of Colorado is considered to be a new source, subject to the requirements of NSPS JJJJ.

NSPS Subpart JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Company: Acme Gas Processing
Source ID: 999/1234/001
Permit #: 93OPXX999
Date: October 1, 2008

Manufacturer: BestEngineCompany
Model: 777 LowNox
Nameplate HP: 1340
Engine Type: 2 Stroke Rich Burn
Manufacture Date: July 1, 2007
Date Engine Ordered: April 1, 2007

Note: If the engine is exempt from a requirement due to construction/manufacture date, supporting documentation must be provided.

Upon adoption of NSPS Subpart JJJJ into Colorado Regulation No. 6, Part A, if the engine is exempt because the engine was relocated within the state of Colorado, supporting documentation must be provided.

☐ NSPS JJJJ **does not apply** to this engine.

☐ NSPS JJJJ **does apply** to this engine.

Note: Using the format below, the source must submit to the Division an analysis of all of the NSPS JJJJ applicable requirements that apply to this specific engine. **The analysis below is an example only**, based on a hypothetical engine that is a rich burn engine, greater than 500 HP, with a manufacture date after July 1, 2007.

Determination of NSPS JJJJ requirements:

60.4230 Applicability

(a)(4)(i) Applies to this engine since it is a rich burn engine, greater than 500 HP, with a manufacture date after July 1, 2007.

60.4233 Emission Standards for Owners and Operators

(e) Owners and operators of stationary SI ICE with a maximum engine power greater than 100 HP must comply with the standards in Table 1.

Non-Emergency SI, Natural Gas, HP≥500, Manufactured after 7/1/2007

NO_x	2.0 g/HP-hr or 160 ppmvd@15% O_2
CO	4.0 g/HP-hr or 540 ppmvd@15% O_2
VOC	1.0 g/HP-hr or 86 ppmvd@15% O_2

Other Requirements for Owners and Operators

60.4234 Emission standards must be met for the lifetime of the engine.

60.4235 N/A - Sulfur content of gasoline.

60.4236 N/A (for now) - After July 1, 2009 owners and operators may not install engines with a power rating ≥ 500HP that do not meet the emissions standards in 60.4230.

60.4237 N/A - Emergency Engines.

60.4238 - 60.4242 Compliance Requirements for Manufacturers – (Not Applicable)

60.4243 Compliance Requirements for Owners and Operators

(b)(2)(ii) To maintain compliance with the emission limits in 60.4233, owners of SI ICE ≥ 500HP must:

- Keep a maintenance plan;
- Keep records of conducted maintenance;
- Maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions;
- Conduct an initial performance test; and
- Conduct subsequent performance tests every 8,760 hours or every three years, which ever comes first, in order to demonstrate compliance with the emission limits.

(g) Air to fuel ratio controllers (AFRCs) must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

60.4244 Testing Requirements for Owners and Operators

(a) Each performance test must be conducted within 10% of the highest achievable load and must comply with the testing requirements listed in 60.8 and Table 2 of NSPS JJJJ.

(b) Performance tests may not be conducted during periods of startup, shutdown, or malfunction, as specified in 60.8(c). If the engine is non-operational when a performance test is due, the engine does not need to be started up just to test it, but will need to be tested immediately upon startup.

(c) Three separate test runs must be conducted for each performance test as specified by 60.8(f). Each run must be within 10% of max load and be at least 1 hour in duration.

(d) To determine compliance with the NO_x, CO, and VOC mass per unit output emission limitations, the measured concentration must be converted using the equations outlined in this section of NSPS JJJJ.

60.4245 Notification, Reports, and Records for Owners and Operators

(a) Owners of all stationary SI ICE must keep records of the following:
(1) All notifications submitted to comply with this subpart;
(2) Maintenance conducted on the engine;
(3) N/A - Manufacturer information for certified engines, and
(4) Documentation that shows non-certified engines are in compliance with the emission standards.

(b) N/A – For emergency engines only.

(c) Owners of non-certified engines ≥ 500HP must submit an initial notification as required in 60.7(a)(1) which includes the following information:
(1) Name and address of the owner or operator;
(2) The address of the affected source;
(3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
(4) Emission control equipment; and
(5) Fuel used.

CONCLUSION OF FINDINGS (EXAMPLE ONLY)

In general, Acme's 1,235HP, Waukesha 7042 GSI engine is subject to the emissions limitations summarized in Table 1 of NSPS JJJJ. ACME will meet these emission limitations using an AFRC and a non-selective catalytic converter (NSCR). These emission rates will be met throughout the life of the engine. A maintenance plan will be kept and all maintenance activities

will be recorded. Compliance with the emission limits will be confirmed by the initial performance tests, which shall be conducted following the procedures outlined in 60.4244. Copies of performance test results will be submitted within 60 days of the completion of each test. Since this is an uncertified engine, an initial notification will be submitted including all of the requested information in 40.4245 within 30 days of startup. ACME will keep records of all compliance related materials.

MACT ZZZZ *Area Source* Example Report Format

DISCLAIMER: This is only an example report and does not cover all possible ZZZZ requirements.

MACT Subpart ZZZZ: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Company: Acme Gas Processing
Source ID: 999/1234/001
Permit #: 93OPXX999
Date: October 1, 2008

Manufacturer: Best Engine Company
Model: 777 LowNox
Nameplate HP: 1340
Engine Type: 2 Stroke Rich Burn
Manufacture Date: July 1, 2007
Date Engine Ordered: April 1, 2007

Note: If the engine is exempt from a requirement due to construction/reconstruction date, supporting documentation must be provided.

☐ MACT ZZZZ **does not apply** to this engine.

☐ MACT ZZZZ **does apply** to this engine.

Note: Using the format below, the source must submit to the Division an analysis of all of the area source MACT ZZZZ applicable requirements that apply to this specific engine. **The analysis below is an example only**, based on a hypothetical new engine located at an area source of HAP emissions.

Determination of MACT ZZZZ requirements:

63.6585 Applicability

This subpart is applicable to Acme's engine since they are going to be operating a new stationary reciprocating internal combustion engine (RICE) at an area source of HAP emissions.

63.6590 What Parts of My Plant Does This Subpart Cover?

(c) A new or reconstructed stationary RICE located at an area source of HAP emissions that is subject to 40 CFR Part 60, must meet the requirements of this part by meeting the requirements of 40 CFR Part 60 subpart JJJJ.

CONCLUSION OF FINDINGS (EXAMPLE ONLY)

Since this engine is subject to NSPS JJJJ, no additional requirements apply under MACT ZZZZ.

MACT ZZZZ *Major Source* Example Report Format

DISCLAIMER: This is only an example report and does not cover all possible ZZZZ requirements.

MACT Subpart ZZZZ: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Company: Acme Gas Processing
Source ID: 999/1234/001
Permit #: 93OPXX999
Date: October 1, 2008

Manufacturer: BestEngineCompany
Model: 777 LowNox
Nameplate HP: 1340
Engine Type: 2 Stroke Rich Burn
Manufacture Date: July 1, 2007
Date Engine Ordered: April 1, 2007

Note: If the engine is exempt from a requirement due to construction/reconstruction date, supporting documentation must be provided.

☐ MACT ZZZZ **does not apply** to this engine.

☐ MACT ZZZZ **does apply** to this engine.

Note: Using the format below, the source must submit to the Division an analysis of all of the major source MACT ZZZZ applicable requirements that apply to this specific engine. **The analysis below is an example only**, based on a hypothetical new engine located at a major source of HAP emissions.

Determination of MACT ZZZZ requirements:

63.6585 Applicability

This subpart is applicable to Acme's engine since they are going to be operating a new stationary reciprocating internal combustion engine (RICE) at a major source of HAP emissions.

63.6590 What Parts of My Plant Does This Subpart Cover?

This subpart covers Acme's new stationary reciprocating internal combustion engine.

63.6595 When do I have to comply with this Subpart?

(a)(5) The engine must comply with the applicable emission limitations and operating limitations upon startup.

63.6600 Emission and operating limitations for RICE site rated at more than 500 hp

(a) The engine is subject to the emission limits in table 1a and the operating limits in table 1b. ACME will meet the emission limitations by reducing formaldehyde emissions by 76 percent and will maintain the catalyst such that the pressure drop does not change by more than 2 inches of H_2O at 100 % load plus or minus 10 percent from the pressure drop measured during the initial performance test and will maintain the temperature of the engine exhaust so that the catalyst inlet temperature is greater than or equal to 750 º F and less than or equal to 1250 º F.

The engine will be equipped with non-selective catalytic reduction and an air fuel controller to meet the emission limitations.

63.6601 & 63.6611 Requirements for 4SLB engines between 250 and 200 hp

These requirements do not apply.

63.6605 General Requirements

(a) The engine will comply with the emission and operating limitations at all times, except during periods of startup, shutdown and malfunction (SSM)

(b) The engine, including air pollution control and monitoring equipment shall be operating in a manner consistent with good air pollution control practices for minimizing emissions at all times, including during SSM.

63.6610 Initial performance test

(a) the performance tests specified in Table 4 (select sampling port and measure O_2, moisture and formaldehyde at inlet and outlet of the control device) shall be conducted within 180 days of startup.

(b) & (c) not applicable construction did not commence between 12/19/02 and 6/15/04.

(d) previous performance tests have not been conducted on this unit within two years, therefore, this provision does not apply.

63.6615 Subsequent performance tests

Subsequent tests will be conducted as specified in Table 3. No additional testing is required for 4SRB engines meeting the formaldehyde percent reduction requirements.

63.6620 Performance test procedures

(b) tests must be conducted at 100 % load plus or minus 10%

(c) tests may not be conducted during periods of SSM.

(d) must conduct three 1-hr test runs

(e) equation (e)(1) shall be used to determine compliance with the percent reduction requirement.

(f), (g) & (h) Not applicable

(i) engine load during test shall be determined as specified in this paragraph.

63.6625 Monitoring, installation, operation and maintenance requirements

(a), (c) & (d) Not applicable

(b) a continuous parameter monitoring system (CPMS) shall be installed to measure the catalyst inlet temperature. The CPMS will meet the requirements in § 63.8

63.6630 Demonstrating initial compliance

(a) initial compliance shall be determined in accordance with table 5 (initial performance test must indicate formaldehyde reduction of 76 percent or more, a CPMS must be installed to measure inlet temperature of the catalyst and the pressure drop and catalyst inlet temperature must be recorded during the initial performance test).

(b) pressure differential will be established during the initial performance test.

(c) Notification of compliance status will be submitted and will contain the results of the initial compliance demonstration.

63.6635 Monitoring to demonstrate continuous compliance

(b) except for monitor malfunctions, associated repairs, and required QA/QC activities monitoring must be continuous at all time the engine is operating.

(c) data recorded during monitoring malfunctions, associated repairs and required QA/QC activities must not be used in data averages and calculations to report operating levels, however, all the valid data collected during other periods shall be used.

63.6640 Demonstrating continuous compliance

(a) continuous compliance will be demonstrated as specified in table 6 (collect catalyst inlet temperature data, reduce that data to 4-hr rolling average and maintain the 4-hr rolling averages to within the operating limitation and measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop meets the operating limitation.

(b) deviations from the emission and operating limitations must be reported per § 63.6550.
If catalyst is changed the operating parameters established during the initial performance test must be re-established.
When operating parameters re-established a performance test must also be conducted.

63.6645 Notifications

(a) Submit notifications in §§ 63.7(b) & (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) thru (e) & (g) & (h) that apply by dates specified.

(b) Not applicable. Acme unit started after effective dated for Subpart ZZZZ.

(c) Submit initial notification within 120 days after becoming subject to Subpart ZZZZ.

(d) thru (f) Not applicable. Acme engine greater than 500 hp and subject to requirements in Subpart ZZZZ.

(g) & (h) Submit notification of intent to conduct performance test and notification of compliance status.

63.6650 Reports

(a) Submit reports required by table 7 (compliance report and SSM reports (if actions inconsistent with SSM plan)

(b) Not applicable, an alternate schedule for report submittal has been approved. Reports will be submitted with title v reports

(c) Compliance reports to contain the following information: company name and address, statement by responsible official certifying accuracy, date of report and beginning and end of reporting period, if SSM the information in 63.10(d)(5)(i), if no deviations a statement saying that, if no periods when CPMS out of control a statement saying that.

(d) Not applicable, using CPMS

(e) For each deviation the information in (e)(1) thru (e)(12) shall be provided.

(f) Applicable. Compliance reports are submitted with title v reports. Compliance reports under Subpart ZZZZ include all necessary info for title v deviation report with respect to Subpart ZZZZ requirements.

(g) Not applicable. Acme engine not firing landfill or digester gas.

63.6655 Recordkeeping

(a) Retain records as follows: copy of each notification and report (including all documentation supporting any initial notification or notification of compliance status), records in 63.6(e)(iii) thru (v) related to SSM, and records of performance tests and evaluations.

(b) CPMS records including records in 63.10(b)(2)(vi) thru (xi), previous versions of the performance evaluation plan required by 63.8(d)(3) and requests for alternatives to the relative accuracy test for CPMS as required by 63.8(f)(6)(i).

(c) Not applicable. Acme engine not firing landfill or digester gas.

(d) Will keep records required in Table 6 (monthly pressure drop readings, 4-hr averages of catalyst inlet temperature) to show continuous compliance with emission and operating limits.

63.6660 Form and length of records

(a) records must be in a form suitable and readily available for expeditions review

(b) records must be retained for five years

(c) records must be retained on-site for first 2 years, may be retained off-site for the remaining 3 years

63.6665 General Provisions

This engine must comply with the general provisions as indicated in Table 8.

CONCLUSION OF FINDINGS (EXAMPLE ONLY)

Since this engine is subject to the requirements of MACT Subpart ZZZZ. The engine will be installed with a non-selective catalyst to meet the formaldehyde reduction requirement of 76% or more. An initial performance test will be conducted within 180 days of startup to demonstrate compliance with the formaldehyde percent reduction requirement. During the initial performance test, the pressure drop across the catalyst will be measured. A CPMS will be installed to measure the catalyst inlet temperature. Continuous compliance will be demonstrated by keeping the 4-hr rolling averages of catalyst inlet temperature within the operating limitations

and recording the pressure drop across the catalyst monthly and demonstrating that the pressure drop is within the operating limitation.

Records, notifications and reports will be submitted as required. To that end required reports and notifications include initial notification, notice of intent to conduct performance test, notification of compliance status, SSM reports (if required) and semi-annual compliance reports.

APPENDIX I
Compliance Assurance Monitoring Plan

I. Background

a. Emission Unit Description:

Eight (8) Waukesha Model L-7042 GSI Natural Gas Fired Internal Combustion Engines, turbocharged, 4-cycle, Standard Rich Burn, powering a natural gas compressor. Engine ratings for each engine are as follows:

Facility ID	AIRS ID	Site Rating
P160 C136	051	1232 HP
P161 C137	052	1232 HP
P162 C138	053	1232 HP
P163 C147	081	1232 HP
P164 C139	055	1000 HP
P165 C140	056	1000 HP
P166 C141	057	1232 HP
P169 C153	060	1000 HP

b. Applicable Regulation, Emission Limit, Monitoring Requirements:

Engines P160/C136, P161/C137, P165/C140, P166/C141

Regulations:	Operating Permit Condition 1.1
Emission Limitations:	NO_X 39.6 tons/yr
	CO 39.6 tons/yr
Monitoring Requirements:	Pressure drop and catalyst inlet temperature

Engine P162/C138

Regulations:	Operating Permit Condition 1.1
Emission Limitations:	NO_X 23.8 tons/yr
	CO 39.6 tons/yr
Monitoring Requirements:	Pressure drop and catalyst inlet temperature

Engine P163/C147

Regulations:	Operating Permit Condition 1.1
Emission Limitations:	NO_X 23.8 tons/yr
	CO 23.8 tons/yr
Monitoring Requirements:	Pressure drop and catalyst inlet temperature

Engine P164/C139

Regulations:	Operating Permit Condition 1.1
Emission Limitations:	NO_X 19.3 tons/yr
	CO 38.6 tons/yr
Monitoring Requirements:	Pressure drop and catalyst inlet temperature

Engine P169/C153

Regulations:	Operating Permit Condition 1.1
Emission Limitations:	NO_X 19.3 tons/yr
	CO 29.0 tons/yr
Monitoring Requirements:	Pressure drop and catalyst inlet temperature

c. Control Technology:

Each engine is equipped with an Air/Fuel Ratio controller and Non-Selective Catalytic Reduction (NSCR) to control NO_X and CO emissions.

II. Monitoring Approach

	Indicator 1	Indicator 2
I. Indicator Measurement Approach	Pressure Drop Across the Catalyst	Catalyst Inlet Temperature
	Pressure drop across the catalyst beds is measured using a differential pressure gauge.	The temperature of the exhaust gas into the catalyst will be measured using an in line thermocouple.

	Indicator 1	Indicator 2
II. Indicator Range	Pressure drop shall be within ± 2 inches of water from the pressure drop baseline value established as specified Condition 1.10.1.1.a. Excursions trigger the permittee to investigate the catalyst performance and make any repairs or adjustments necessary. Any adjustments or repairs shall be recorded in the log to be made available to the Division upon request.	The exhaust gas into the catalyst shall be greater than or equal to 750ºF and less than or equal to 1250ºF. Excursions trigger the permitee to investigate the engine performance and make any repairs or adjustments necessary. Any adjustments or repairs shall be recorded in the log to be made available to the Division upon request.
III. Performance Criteria		
a. Data Representativeness	The pressure drop across the catalyst is measured at the catalyst inlet and outlet.	The catalyst inlet temperature is measured upstream of the catalyst. The minimum accuracy is +/- 5º F
b. Verification of Operational Status	N/A	Guarantee from the thermocouple manufacturer.
c. QA/QC Practices and Criteria	Pressure gauges shall be calibrated and replaced in accordance with manufacturer's recommendations.	Thermocouples shall be calibrated and replaced in accordance with manufacturer's recommendations.
d. Monitoring Frequency	Monthly	Daily.
e. Data Collection Procedures	The pressure drop shall be recorded monthly in a log to be made available to the Division upon request.	The catalyst inlet temperature shall be recorded daily in a log to be made available to the Division upon request.
f. Averaging Period	None	None

III. Justification

a. Background:

The pollutant specific emission units are eight (8) internal combustion engines used to drive compressors. Each engine is equipped with a non-selective catalytic reduction unit to control NO_X and CO emissions. The non-selective reduction catalyst reduces NO_X emissions to nitrogen and water as well as reducing CO emissions by formation of CO_2.

b. Rational for Selection of Performance Indicators:

The Division selected the pressure drop across the catalyst as it is an indicator of the catalyst performance. A change in the pressure drop across the catalyst can indicate if the catalyst is damaged or fouled, which would decrease catalyst performance. The inlet temperature to the catalyst was approved as an indicator since the temperature is important for the proper activation of the catalyst.

The final RICE MACT requires monitoring of inlet temperature to the catalyst and the pressure drop across the catalyst. The CAM rule specifies that monitoring required for a MACT standard is presumptively acceptable monitoring, provided the monitoring is applicable to the performance of the control device (40 CFR Part 64 § 64.4(b)(4)). Since the MACT monitoring is for the same control device, the Division considers that the indicators are presumptively acceptable.

c. Rational for Selection of Indicator Ranges:

The indicator range for the catalyst inlet temperature and the pressure drop cross the catalyst are the same ranges as specified in the final RICE MACT. Since the monitoring is presumptively acceptable, the Division considers that the indicator range is also presumptively acceptable.